# New York Berry News

CORNELL UNIVERSITY

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lueberries are starting to wind down and fall raspberries are coming into play with this issue of The New York Berry News . Hope your 2006 small fruit season has been prosperous. In the line up this month we have much by way of new and noteworthy: a calendar full of educational opportunities, the fall 2006 CleanSweep program for Chautauqua, Cattaraugus, Allegany, Steuben, Chemung and Schuyler Counties, funding opportunities for growers/producers, a new farmer loan program, more on the health benefits of blueberries, a potentially new/old strawberry pest, success stories of 2 new farm ventures in currants and strawberries, a renewable energy conference, an announcement for the 2006 Cornell Raspberry High Tunnel Open House, highlights from the North Country Small Fruit Twilight Tour and an inside look at diseases that may cause poor fruit set and sterility in Brambles. And Oh yes, the weather report, of course!

**CURRANT EVENTS** 

September 16. **Advanced Renewable Energy Workshop** 10:00 - 2:00 Cost: \$75.00 Apple Pond Farm & Renewable Energy Education Center, Callicoon Center NY, 12714 Call: 845 482 4764

September 16-17. **Northeast Small Farm and Rural Living Expo.** Sussex County Fair Grounds, Augusta, New Jersey. For further information, visit the Expo web site at <u>http://www.smallfarmexpo.org</u>.

September 30- October 8. **New York Harvest for New York Kids Week.** For ideas visit: <u>http://www.nyfarms.info/farmtoschool.html or http://www.prideofny.com/farm\_to\_school.html or http://farmtoschool.cce.cornell.edu/</u>

October 6-7. **U.S. Highbush Blueberry Council Fall Meeting**, Regency, Bar Harbor, Maine. For more information: 207-288-9723.

October 10-12. **Advancing Renewable Energy Conference**, America's Center, St. Louis, Missouri. For more information: 1-877-448-3976 or <u>http://www.technologyforums.com/6EN/index.asp</u>.

November 9-11: **Southeast Strawberry Expo**, Sea Trail Conference Center, Sunset Beach, NC. For more information, call 919-542-3687, email ncstrawberry@mindspring.com, or visit <u>www.ncstrawberry.com</u>.

December 5-7.- **Great Lakes Fruit, Vegetable and Farm Market Expo**, DeVos Place, Grand Rapids, Michigan. For more information: <u>http://www.glexpo.com</u>.

December 11-13. **New England Vegetable and Berry Conference**. For more information: <u>www.nevbc.org</u>.

January 16-17, 2007. **NABGA National Bramble Conference**, Columbus, Ohio, in association with the Ohio Fruit & Vegetable Congress. For more information: <u>http://www.raspberryblackberry.com</u>.

### **DID YOU KNOW?**

Strawberries are the 3rd most valuable fruit in New York and place New York 7th in national production.



About 5.2 million pounds were harvested in 2005 and returned \$8.06 million to growers.

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# **BLACK CURRANTS: NEW CROP, NEW LIFE FOR NY FARMER**

urt Rhodes of R.H. Rhodes and Son, Inc., Penn Yan, NY, ended his 40-year career as a fifth-generation vegetable farmer in 2004, but he did not leave farming. Having read about Hudson Valley fruit grower Greg Quinn's successful campaign for the repeal of the ban on growing black currants in New York State, Rhodes applied for a New York Farm Viability Institute (NYFVI) Small Specialty Crops Production Business grant.

In the article Rhodes read, Quinn listed health benefits associated with red and black currants and the potential marketing opportunities. Currants have four times the vitamin C of oranges and twice the antioxidants of blueberries, Quinn said. Rhodes contacted Yates County Cornell Cooperative Extension Educator Judson Reid, who told him about the NYFVI grant program and Rhodes career as a fruit producer began. The



New York Farm Viability Institute awarded Rhodes \$10,000 to plant a one-acre field trial of black currants in 2004.

The first year I only expect 1,000 lbs on the acre, but in the second and following years I am plan on harvesting 2,500 lbs. to 3,000 lbs per acre, Rhodes says. This has been such a successful venture that I recently planted 17 more acres of black currants. The first acre will be harvested by hand. Next year I will have to invest in a mechanical harvester

The first harvest has been sold to Montezuma Winery in Seneca Falls, NY, for a new variety of fruit wine. Winery owner and winemaker Bill Martin says, We make twenty-three different wines from honey, fruit and grapes. Our winery uses only New York State fruit in its production. The wines include those made from pear, strawberry, blueberry, apricot, apples, raspberries, cherries and rhubarb. The black currants will make an important contribution to our line.

Dr. Olga Padilla-Zakour of the Cornell Food Venture Center has worked with Rhodes to explore new potential products for his black currants.

Once the currants are in full production, we will be developing new beverages, jams and other products. At that time, we will be able to document the levels of beneficial anti-oxidants and vitamins in each product, Padilla-Zakour says.

The federal government had banned the indigenous black currants in 1911 when the burgeoning logging industry put pressure on lawmakers to eliminate currants because they were thought to be an intermediate host of white pine blister rust. New disease resistant varieties of currants were developed and in 1966 the government left it up to the states to lift the ban. Gregg Quinn persuaded New York State legislators to lift the ban in 2003.

New York State was the leading commercial producer of red currants in the U.S. before the ban, says Quinn, who is presently teaching landowners and farmers how to grow currants. It is his desire to see New York return to being the number one producer of currants and set the standard for quality. Quinn has developed 65 new currant products

R.H. Rhodes & Son Farm has recently adopted the name Fingerlakes Black Currant Company. Rhodes will adorn of all his anticipated products with an historic label the copyright expired in 1920 - for currants found in an antique store in Canandaigua

The funds for the NYFVI's Specialty Crop grants program that provided Rhodes with funding for his new enterprise were made available by the New York State Department of Agriculture and Markets from the United States Department of Agriculture (USDA

With this funding we were able to award seventeen small grants for specialty crops, says New York Farm Bureau President and NYFVI Board Chairman John Lincoln. We are hoping for more of this type of funding from the USDA in the future Farm Bill to replicate these significant results.

The NYFVI is a farmer-led, farmer-driven, independent not-for-profit corporation that funds research, extension and innovative technologies for New York agricultural and horticultural producers. The Institute grants funds for projects that directly benefit producers at the enterprise level across farms of all sizes and all commodity areas. The NYFVI 2006 grant-making cycle is now in process. In 2005, NYFVI awarded \$2.8 million to 33 agricultural research and educational projects

For more information, contact Curt Rhodes, Fingerlakes Black Currant Company, 585-526-5628 or R. David Smith, New York Farm Viability Institute, Inc., 159 Dwight Park Circle, Suite 104, Syracuse, NY 13209, 315-453-3823, <a href="http://www.nyfarmviability.org">www.nyfarmviability.org</a>.



Cornell University's College of Agriculture and Life Sciences

# Raspberry High Tunnel Open House

### Friday, October 20, 2006, 1 to 4 PM

ornell University invites you to attend the second annual Raspberry High Tunnel Open House to observe raspberries growing and fruiting in late October – well past the time when they are normally in season. Come by Cornell's East Ithaca farm on Friday October 20 between 1:00 and 4:00 to meet with researchers, taste fruit, study this new technology and market opportunity, and hear results from year 1 of this research and demonstration trial.

The East Ithaca Farm is located on Maple Ave., adjacent to the Cornell Campus. Coming from Rt. 79 east, turn right onto Pine Tree Rd., go through the stop light by East Hill Plaza, and take the next left on to Maple Ave. The research farm is on the right, past the cemetery.

Coming from Rt. 13 north, take Rt. 366 towards Ithaca. Turn left onto Pine Tree Road at the flashing red light, just past Cornell Orchards. Take the next right onto Maple Ave. The farm is on the right, past the cemetery. Coming west on 79, or south on 96 or 89, take Rt. 79 east through Ithaca and up the hill. Midway up the hill, bear left onto Rt. 366. At the first stoplight, take a soft right onto Maple Ave. (not a hard right). The farm is at the top of the hill on the left.

For more information contact Molly Shaw, <u>meh39@cornell.edu</u>, 607-687-4020, or Cathy Heidenreich, <u>mcm4@cornell.edu</u>, 315-787-2367.

# **BLUEBERRY FRUITWORM TRIAL MEETING**

ednesday, September 13, 2006, 9:30 AM-12:00 PM. Tioga County, NY. At this meeting we will review the results of this years trap network for blueberry fruitworms and well visit two Tioga county farms, TCL Blueberries in Smithboro and Garys Berries in Campville.

Focus will be on equipment for spraying and mulching, as well as insect, weed, and disease control. 2.5 fruit category pesticide credits are available.

For more information and to register, call 607-687-4020.

# MAINTAIN GOOD SOILS TWILIGHT MEETING

**C** eptember 27, 2006, 6:30-8:30 PM. Iron Kettle Farm, Catatonk, NY. Cornell's Soil Health team uses measures of soil quality that go beyond the normal nutrient analysis to look at compaction, water infiltration, and much more.

At the meeting we will demonstrate techniques to compare soils under different management and cover cropping practices. Come learn how to assess your soils and keep them productive.

For more information and to register call CCE Tioga at 607-687-4020.

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# **CLEANSWEEP NY FALL 2006 PROGRAM**

Attention Growers & Other Pesticide Applicators of: Chautauqua, Cattaraugus, Allegany, Steuben, Chemung and Schuyler Counties



he New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Agriculture and Markets (Ag. & Mkts.), Soil and Water Conservation District (SWCD), and Cornell Cooperative Extension are pleased to announce the CleanSweep NY Program for Fall of 2006.

On November 7 - 9, 2006, there will be an entirely legal and economical opportunity to dispose of all canceled, obsolete or otherwise unusable pesticides. At these same events, elemental mercury, particularly from dairy manometers, and accumulations of triple-rinsed plastic or metal containers will also be collected and recycled. This pesticide collection event is called "CleanSweep NY" and is funded through monies made available by NYSDEC. The CleanSweep NY Program will:

- 1. Hire a professional waste hauler to dispose of unwanted pesticides.
- 2. Provide on-farm or on-site assistance, when needed.
- 3. Provide analytical services to identify unknown/unlabeled pesticide products.
- 4. Collect for recycling triple-rinsed metal and plastic pesticide containers.
- 5. Provide on-farm pickup for predetermined structurally unstable containers.

This program was funded expressly for New York growers or former growers applying products to agricultural commodities; and for those participants, the service will be free of charge. Other potential holders of pesticides who have approached NYSDEC requesting participation in this worthwhile program have also been encouraged to participate. These businesses include: professional/commercial applicators, local municipalities, schools and retail/distribution establishments.

Because there is a finite funding source for this effort, CleanSweep NY will accept, free of charge, only the first 100 pounds of pesticides from any non-farm participants. CleanSweep NY waste haulers will charge businesses/government agencies and commercial agricultural and non-agricultural applicators on the actual day of collection, a per pound price for any remaining weight over 100 pounds. The charge to non-agricultural holders is \$1.10 per pound for products delivered to collection sites and \$1.25 per pound for on-site pickup of products with unsafe packaging. Disposal costs for compressed gas cylinders and elemental mercury or mercury containing devices are charged at different rates which are posted at <a href="http://www.cleansweepny.org">http://www.cleansweepny.org</a>. This program is not able to accept pesticide waste from homeowners.

There will be no charge to anyone returning empty, triple-rinsed metal or plastic pesticide containers. All tops must be removed from all metal containers prior to drop off.

# It is important to note that no enforcement action will be taken by NYSDEC for participation in this program.

This collection effort will be facilitated by NYSDEC staff in conjunction with an independent consultant, Arrowchase, Inc., located in Washington, D.C. You may be contacted by a representative of your NYSDEC Pesticide Office, Soil and Water Conservation District, Cornell Cooperative Extension or local agribusiness concerning participation in this program. Registration forms must be completed and returned for your participation in this program. In order to properly plan and carry out this program, which may include the collection and analysis of any unknowns, it is important that you fill out all portions of these forms and submit your registration so it is **received no later than October 3, 2006**. Because it may be necessary to contact you with questions for clarifying the information you provide, it is very important that you give us a contact name, phone number, mobile phone number, fax number or an e-mail address. We stress that your confidentiality will be maintained. Please assure that the number(s) provided are ones with the highest likelihood of successfully contacting you up to and including the collection week in November. **Do not include phone numbers for seasonal establishments that will not be open in November**.

Additionally, it is important that we know:

- 1. The name and EPA number, if available, of the pesticide to be turned in.
- 2. The number of obsolete pesticides, container sizes, and estimated quantity remaining in liquid or dry measurement units.

- 3. Although you may know what the pesticide is, an unlabeled container is an unknown and should be labeled as such on the registration form.
- 4. Whether or not the packaging surrounding each product is in a condition that allows for its safe transportation to a collection site without spilling or leaking? Please indicate this in the appropriate box on the registration form.

Should you need additional forms or have any specific questions about this program, please contact Ed Hanbach, NYSDEC Region 8, at (607) 776-2165 X21, Glenn Reinhardt, NYSDEC Region 9, at (716) 851-7220, call the toll-free hotlinet:1-877-SWEEPNY (1-877-793-3769), or send an email to <u>info@cleansweepny.org</u>.

At your convenience, county cooperators may visit your farm or facility to assist you in assessing the need for any sampling and analysis of an unlabeled container or for the identification of qualifying products for collection. On or before October 30, 2006, you will receive an appointment card with your drop-off location and time, as well as the necessary transportation information. This will also be the location for the return of any triple-rinsed metal drums or plastic pesticide containers.

Undoubtedly, many of you will have questions about this CleanSweep NY obsolete pesticide collection program. An informational website has been established at: <u>http://www.cleansweepny.org</u>. You may also call toll free at 1-877-SWEEPNY (1-877-793-3769), or again send requests for information to <u>info@cleansweepny.org</u>.

In summary, this is your best opportunity to clean out old, unwanted, canceled or otherwise unusable pesticide products and to dispose of metal and rigid plastic pesticide containers. The cost to you is little or nothing, yet the value to you and the environment are considerable. We urge you to participate.

## 2006 NEW YORK FARM VIABILITY INSTITUTE APPLIED RESEARCH PARTNERSHIP GRANTS

The ARP grants program is intended for projects of up to a two year duration that will work directly with agricultural producers to make their businesses more successful while providing models that other producers of these crops and products can implement to strengthen the performance of their sector of New York's agricultural economy. The Institute will consider projects that focus on farm-level applied research and demonstration of recently completed more basic research and development efforts. Proposals will be accepted from researchers and educators at academic institutions, extension staff and others involved in agricultural research and development, technology adoption and business assistance in the agricultural sector. **Proposals are due October 2, 2006.** For more information: http://www.nyfarmviability.org/grant-appliedresearch.htm.

# **ANOTHER STRAWBERRY INSECT!**

Kathy Demchak, Department of Horticulture, Penn State University

Using strawberry harvest this year (2006, for those of you who didn't read this article right away), Jim Bridge - a grower in southwest PA - called me. He had damage on his strawberry fruit that was exactly like you'd expect from tarnished plant bugs. The damage was especially bad on the cultivar 'Ovation'. Jim swore that he didn't have tarnished plant bugs, and I thought he might need to have his eyes checked. Then he sent me some fruit samples – which had classic "button-berries"- and a vial full of insects. Greg Hoover (thank you, Greg!) identified the insects as "long-necked seed bugs" (*Myodocha serripes*). One of their preferred foods is strawberry seeds, so the damage they cause on strawberries is very similar to that of tarnished plant bug.

There are numerous (copyrighted) images of these insects on the Internet, which you can check. If I get a chance to take a photo of a long-necked seed bug, I'll include that in a later article also.

By way of a description, they are dark-brown slender insects; slightly less than  $\frac{1}{2}$ " long with a disproportionately small head that thins out into what resembles a neck. They also have thin antennae about half as long as their bodies.

You probably won't find them in your strawberry patch now, but you might next spring. If you do, please let me (or your county Extension Educator) know, and also whether they seem to be causing damage - I'd like to know how often they are a problem.

(Reprinted from: The Penn State Vegetable & Small Fruit Gazette, Volume 10, No. 8, August 2006)

### USDA AND DOE ANNOUNCE NATIONAL RENEWABLE ENERGY CONFERENCE FOR OCTOBER

SDA and DOE have announced that they will co-host a national renewable energy conference to help create partnerships and strategies necessary to accelerate commercialization of renewable energy industries and distribution systems.

The conference, <u>Advancing Renewable Energy: An American Rural Renaissance</u>, is scheduled for October 10-12, 2006, in St. Louis, Missouri.

"We are hopeful this conference will identify major impediments and critical pathways to get more domestically grown, renewable energy sources out of the laboratory and into consumers' hands as soon as possible," said Energy Secretary Samuel Bodman.

The conference will address biomass, wind, and solar research and commercialization.

## NYS OFFERS NEW BEGINNING FARMER LOAN PROGRAM

he New York Beginning Farmer Loan Program (NYBFLP) provides low-cost financial assistance to Beginning Farmers in New York State (NYS) for the purchase of agricultural property and equipment to help start a farming business or to facilitate inter-generational transfer of a farm business.

The NYSBFLP is administered by the NYS Environmental Facilities Corporation (EFC), in conjunction with the NYS Department of Agriculture and Markets (NYSDAM).

The assistance is in the form of tax incentives to Lenders who make loans to qualified Beginning Farmers. This allows Lenders to pass assistance on to the Beginning Farmer in the form of lower interest rates on loans. Tax-exempt Aggie Bonds are used to finance the low-interest loans. With the NYBFLP, the Beginning Farmer will save money because of the reduced interest rate paid over the term of the loan.

In order to take advantage of this program, the Beginning Farmer works together with their Lender (who is willing and able to purchase EFC's Aggie Bond to fund the Beginning Farmers loan) to arrange the terms of a loan. Loan terms include the farmer's credit evaluation, security, collateral and length of loan, interest rate, etc. The loan will ultimately be the Beginning Farmers obligation to the Lender, as in a normal loan. After the terms are set, both the Beginning Farmer and the Lender jointly apply to the NYBFLP.

While the NYBFLP loan maximum is \$250,000, there is no minimum NYBFLP loan amount. The maximum term of the loan is up to 40 years, as determined by the useful life of the equipment or property being financed.

NYS does not directly provide funds to finance the Lender loan, but uses the Lender's money from their bond purchase to pass on to the Beginning Farmer in the form of a loan that is assigned back to the Lender. NYS or EFC shall not be liable or responsible for the failure, in any way, by either the Beginning Farmer or the Lender, and EFC cannot recommend a specific Lender to the Beginning Farmer.

NYBFLP fees include a non-refundable \$150 application fee and a 1.5% loan closing fee. The minimum loan closing fee charged is \$750. Total State fees for a \$250,000 loan are \$3,900.

NYSDAM's role in the NYBFLP is to provide technical support and marketing assistance to EFC. NYBFLP may be used to purchase agricultural land and depreciable agricultural property, or to make agricultural improvements. The loan maximums under existing New York and federal laws are:

- A lifetime total of \$250,000 for agricultural land and improvements
- Of that total, \$62,500 can be for used depreciable agricultural property.

To be eligible, a Beginning Farmer:

- Must be an individual. Loans to corporations, partnerships, LLCs, etc. are ineligible under the Internal Revenue Code (IRC)
- May not have previously owned any substantial farmland, as defined in federal laws.

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• Labor must be performed and management provided by the Beginning Farmer, his or her spouse/fiancee and/or minor children and Beginning Farmer may not cash rent or custom hire a majority of the field work or livestock management to be completed.

To learn more about the NYBFLP, please call 1-800-200-2200 to speak to the Beginning Farmer Project Manager at EFC. Or e-mail: <u>beginningfarmer@nysefc.org</u>

# NEW YORK STATE AGRITOURISM GRANT PROGRAM

The New York State Department of Agriculture and Markets is pleased to announce the release of the NY State Agritourism Grant Program Request for Proposals (RFP). Individuals, public and private agencies and organizations, business and industry, educational institutions and local governments are eligible to apply for matching grants up to \$50,000.

By any measure, the food, agriculture and tourism industries are the leading sectors in the NY State Economy. They are also sectors which compliment each other, and when combined, offer significant opportunities for industry and community enrichment and growth throughout the State. This new program is designed to take advantage of the opportunities agritourism offers to promote and grow the NY State food and agriculture industry.

Proposed projects should involve attracting visitors to farms, food and agricultural industry locations for education, entertainment, recreation, social, cultural or environmental activities. Traditional, as well as innovative agritourism programs, projects, and activities that will promote and enhance the public's understanding, awareness and appreciation of this important economic sector will be considered.

The RFP can be downloaded from the Ag and markets website at <u>www.agmkt.state.ny.us</u>. To reach the RFP click on the "Funding Opportunities" section on the left side of the Department home page, then click on "New York State Agritourism Grant Program".

Proposals for funding must be received by the Department before 4:30 PM EST on September 11, 2006. If you prefer to receive a hard copy of the RFP, please contact Meg McCabe by e-mail at <a href="mailto:meg.mccabe@agmkt.state.ny.us">meg.mccabe@agmkt.state.ny.us</a> or by phone at 518-457-2195 or by mail at: NYS Department of Agriculture and Markets, 10B Airline Drive, Albany, NY 12235.

# **BLUEBERRIES PACK A POWERFUL HEALTH PUNCH**

Frances A. Largeman, RD

Www lide blueberries rank number one in antioxidants for fruit, according to the U.S. Department of Agriculture, with a score of more than 13,000 for total antioxidant capacity. Cultivated blueberries are the second highest, with about 9,000 (for comparison, Gala apples score around 3,900). There's no official recommendation for daily antioxidant consumption, but they are known to be important for fighting off free radicals in our body and from the environment. Free radicals cause damage to cells, disrupting the DNA and potentially setting up the body for disease. And the cell damage may be at the root of a host of health issues, from aging to macular degeneration to cancer to Alzheimer's disease. But antioxidants scavenge those free



radicals in the body, neutralizing their effects. According to the National Cancer Institute, considerable research suggests that antioxidants may slow or possibly prevent cancer. They also fight inflammation, now known as one of the main causes of diseases like arthritis and cancer.

Besides blueberries, antioxidants are found in vegetables, nuts, grains, legumes, and other fruits. Beta-carotene, lycopene, and vitamins A, C, and E are all classified as antioxidants. But blueberries also are loaded with lesser-known antioxidants. Anthocyanin gives blueberries their vivid color. And another blueberry antioxidant, epicatechin, which is also found in cranberries, can help keep your urinary tract healthy because it prevents bacteria from sticking to the lining of the bladder. Recent studies in lab animals have also highlighted the cholesterol-fighting benefits of another blueberry antioxidant, pterostilbene. And blueberries also contain the antioxidant resveratrol, which is found in red wine, peanuts, grapes, and some berries. Studies are still preliminary, researchers caution, but resveratrol may help fight Alzheimer's disease. If all these health benefits aren't reason enough to add blueberries to your diet, though, the sweet-tart taste of a handful of fresh wild blueberries or a sprinkling of regular berries on your morning cereal should be.

(Copyright 2006 Health magazine. July 2006, from: Rutgers Blueberry Bulletin, Vol. XXII, No. 19)

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### **EPA FINALIZES REGULATIONS FOR PESTICIDE CONTAINERS/CONTAINMENT**



 PA's final regulations, "Standards for Pesticide Containers and Containment" were published on August 16, 2006 (Federal Register Vol. 71, Number 158, pp. 47329 – 47437.
A summary of these regulations can be accessed from the following link: http://www.epa.gov/pesticides/regulating/container\_requirements.pdf

#### Highlights of the regulations include five basic parts:

- 1. **Nonrefillable Containers:** This section addresses "one-way" or disposable containers and applies to pesticide registrants. The purpose of these standards is to ensure that containers are strong and durable, minimize human exposure during container handling and facilitate container disposal and recycling.
- 2. **Refillable Containers:** This section applies to containers that are intended to be refilled and reused more than once and applies to pesticide registrants. The purpose of these standards is to ensure that containers are strong and durable, minimize cross-contamination of pesticides distributed in refillable containers, and encourage the use of refillable containers to reduce container disposal problems.
- 3. **Repackaging:** This section, which describes procedures and other safeguards for repackaging pesticide into refillable containers, applies to pesticide registrants and anyone who refills pesticide containers for sale (registrants, formulators, distributors and dealers). These regulations are intended to minimize cross-contamination of pesticides distributed in refillable containers, codify safe refilling management practices and encourage the use of refillable containers to reduce container disposal problems.
- 4. **Labeling:** The labeling segment includes instructions for how to properly clean pesticide containers and a statement identifying the container as nonrefillable or refillable. Pesticide registrants are required to ensure that labels include the specified information. Pesticide users are required to comply with the instructions on the labels.
- 5. **Containment Structures:** This section establishes standards for secondary containment structures at certain bulk storage sites and for containment pads at certain pesticide dispensing operations. Pesticide dealers who repackage pesticides, commercial applicators and custom blenders have to comply with the requirements. The purpose of these standards is to protect the environment from leaks and spills at bulk storage areas and from contamination due to pesticide dispensing operations.

#### **Related Documents**

On February 11, 1994, EPA published proposed regulations, "Standards for Pesticide Containers and Containment" (59 FR 6712).

On October 21, 1999, EPA published a supplemental notice reopening the comment period (64 FR 56918) on issues brought out in comments on the proposed rule or by recently enacted legislation. The Food Quality Protection Act (FQPA) of 1996 amended section 19(h) to add an exemption for certain antimicrobial pesticides. The 1999 supplemental notice discussed potential changes in the pesticide container standards that would:

- 1. narrow the scope of the proposed container/containment regulations based on toxicity category and container size;
- 2. exempt certain antimicrobial products from the container standards; and
- 3. adopt and refer to some of the Department of Transportation (DOT) packaging standards.

The notice also provided an alternative definition of small business for certain sectors of the pesticide industry. The overall effect of the notice was to focus on higher-risk pesticide products and to exempt lower-risk products from certain container standards in the 1994 proposed rule. The changes promoted the use of refillable containers and strove for consistency with the federal packaging standards by adopting the DOT standards. It proposed a reduction in the number of pesticide products subject to the container requirements compared to the original proposal.

On June 30, 2004 EPA published a Federal Register notice to reopen the public comment period on the proposed regulation establishing standards for pesticide containers and containment.

Because significant time had passed since the publication of the proposed regulation, EPA reopened the comment period prior to preparing a final rule. EPA wanted to obtain public input on any issues or technology relating to the proposed requirements that would not have been available or could not have been addressed in earlier comment periods.

For additional information about the pesticide container and containment rule, contact: Nancy Fitz, 703-305-7385, <u>fitz.nancy@epa.gov</u> or Jeanne Kasai, 703-308-3240, <u>kasai.jeanne@epa.gov</u>.

### NORTH COUNTRY SMALL FRUIT TWILIGHT TOUR HIGHLIGHTS More than 60 Attend Franklin County Berry Production Workshop

Richard Gast, Programs Assistant, Horticulture and Natural Resources, Franklin County CCE, Malone, NY 12953

n July 13th, Cornell Cooperative Extension of Franklin County presented an evening berry growing workshop with the focus on raspberry and blueberry production for home use or for profit. The workshop was presented free of charge. Guest speakers were Marvin Pritts; Professor and Chair; Department of Horticulture Cornell



University College of Agriculture and Life Sciences and Greg English-Loeb, Associate Professor Department of Entomology, New York State Agricultural Experiment Station, Geneva.

More than 60 people from across the region came to see the David and Cindy Rotman farm and then moved on to look at blueberry plantings at the home of Barbara Comstock.



The workshop proved to be an extremely informative and instructive one. Those in attendance were afforded a close look at the cultivation techniques being used by the growers and an opportunity to talk with both the growers and the experts about varieties, cultural practices (site selection, establishment, maintenance), harvest and handling practices, pest management, marketing methods, and irrigation systems.

Insights and answers were provided for the many questions that were asked and issues that were raised.

Both growers have large berry plantings. And both sell their berries retail at roadside stands or by U-Pick.

Attendees also got to share in a very special treat. They were served a delightful homemade raspberry crisp that Cindy Rotman had prepared for the group. Raspberry crisp for 60!! And it was out of this world!

Dr. Marvin Pritts, raspberry grower David Rotman, and Professor Greg English-Loeb (from left) look at raspberry cane borer damage infested canes before giving workshop attendees a first hand look at the damage.

Many dairy farmers are looking to diversify and berry production is just one available alternative. The Rotmans, former dairy farmers themselves, are proof that diversification works and that transitioning from milk production altogether can be accomplished successfully without leaving agriculture.

# **STRAWBERRY HYDROSTACKERS-COULD THEY BE A PART OF YOUR FUTURE?**

Sabrina H. Matteson, Managing Editor, NH Farm Bureau's "The Communicator", Concord, NH 03301

James Dunn thought he wanted to be one for quite a while, but he committed himself to be a farmer only a few months ago. He had already traded his property investment in Chelsea, Massachusetts for Jonathan Downing's Barr Farm in Alton Bay, New Hampshire, but he wasn't convinced how he was going to make it work. He discovered his answer at the Strawberry Festival at Plant City, Florida in February. He opened his Pick-Your-Own business with his first crop on the weekend before July fourth.



#### "HYDROPONIC STRAWBERRIES COMING SOON!" declared Jim's banner sign on Route 11. "U-PICK. NO BENDING! NO KNEELING!"

Modern technology has revolutionized Jim's one acre field at the Barr Farm into three acres of strawberry plants. "These hydrostackers allow me to have twenty plants in a vertical stack that only take up the surface area of one plant," explained Jim. "This method of farming is an easy way for people with limited space to have a small, efficient garden using a minimum amount of water."

Jim knows all about water. His experience in property management and plumbing made the explanations of the hydrostacker technology easy to understand back in February when he put his name on the stacker waiting list, expecting to open his farm stand a year later. Then came the call from Chester Bullock, the stacker guru with thirty

years of experience growing hydroponic crops in Florida. Jim put his money where his farm is and bought the stackers when another buyer got cold feet and cancelled their order. Jim and his family went into overdrive to get the area prepared for the shipment of strawberry plants by the middle of April.

Three minutes, three times a day allows the three quarts of liquid nutrient to filter down the core root area of the hydrostacker.



In the cold and rain of early spring, the 120 by 120 foot area was staked out with string so that Jim could plan where to trench the ground for utilities. Three water lines and electrical lines run underground out to the stacker area from the pump house, where he



manipulates the moisture for the crop with four barrels of nutrients and fertilizer injectors, depending on the requirements of the plants. Two thousand feet of thin-wall metal tubing supports both the stackers and the 8,000 feet of piping for the nutrient and mist systems. An additional mist system for emergency frost prevention runs on top of the ground cover at the base of the stackers.

"I only have one full-time helper for this project," said Jim. "Donny Heater and I work on this every day, but I also have the help of my son and daughter,

my mother and sister, and a nephew. It took us a full two weeks just to mix together the vermiculite/perlite growing mixture!" That light weight, high water retention soil-less mixture was then placed into the Styrofoam stacker modules. New York Berry News, Vol. 5, No. 8 - 10 - Tree Fruit & Berry Pathology, NYSAES Each stack of twenty plants is fed by a spaghetti tube that fertilizes the core of the stack from the cup at the top, called the diffuser. The liquid feed saturates the growing mixture in the five rows of stacker pots, and the waste water leaks out the funnel at the bottom of the stack.



In early June, Jim had set his timed irrigation for three minutes of feeding three times a day with root stimulant for his new plants. He expected to have to adjust the amount when the rain finally stopped, but consistently monitors the efficiency of his irrigation system by assessing the amount of water that leaks out the bottom cone.

"With this system there is almost no wasted water," explained Jim. "Three quarts of liquid a day are keeping each stack of twenty plants plenty moist. I figure that's about a third of the water that would be required if these plants were in a field. I also know that all the fertilizer is going right to the plants." Jim's biggest challenge this spring has been manipulating the pH of his water because the rain has continuously leeched out the nutrients.

Jim is proud to be implementing technology that is available for

viewing at Epcot and in use on the Space Station. But Jim has the only hydrostacker system in New England. "This has been a fun project – OK. a little expensive, too - but I love living here in

New Hampshire and working in the open air," declares Jim with great satisfaction. "I wake up every morning to the singing of a finch instead of the screech of sirens. Plus, I love having my family involved in my work."

Jim's vegetable garden will also be planted in hydrostackers for the summer season. "Most vegetable plants grow normally in the stacks," explained Jim. "The plants that grow on vines have the root in the stacker and the fruit, such as pumpkins or squash, rest below the stacker on the ground." Hydrostacker systems are also available for sale at the farm for strawberry and vegetables.

James Dunn can be reached at Barr Farm on his cell phone at (617) 201-5125. The U-Pick operation on Route 11 in Alton just south of the Bay is open from 8 to 5 during the strawberry season.

(Reprinted with permission from: The Communicator, NH Farm Bureau newsletter, Summer 2006)

### **BRAMBLES - DISEASES MAY CAUSE POOR FRUIT SET AND STERILITY**

John Hartman, Extension Plant Pathologist, University of Kentucky

🕈 amples of bramble fruits (red and black raspberries and blackberries) with poor or no fruit set are appearing in the Plant Disease Diagnostic Laboratory this month. Sterility symptoms being observed include no fruit set, small, misshapen berries, and small and crumbly fruits.

#### Potential Causes of Sterility in Brambles

Anthracnose disease. Fungi causing anthracnose diseases were active during cool, moist periods this spring. Infections of flowers during bloom could result in damaged fruit or no fruit set. The new canes emerging this spring may also begin to show anthracnose lesions and cankers.

Virus diseases. A number of viruses affect raspberry and blackberry fruit production. Some cause sterility problems. Tree Fruit & Berry Pathology, NYSAES

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*Raspberry Mosaic Virus* causes small, crumbly berries. Leaves may have mosaic symptoms consisting of light green to dark green or yellow to green mottling and blistering of leaves. The plants show a progressive stunting of growth and poor yield.

*Raspberry Leaf Curl Virus* reduces fruit production and fruits may be small, crumbly, and seedy. Infected leaves are rounded, downward curled, and have a dark green greasy appearance.

*Tobacco Streak Virus* also reduces fruit production. Leaves are deformed with yellow blotches.

*Tomato Ring Spot Virus* causes small, crumbly fruit. Leaves may show pale yellow rings and plants are stunted.

Lack of bee activity may result in a crumbly berry condition. Normally, raspberry flowers have 100-125 pistils. Typically, 75-85 drupelets will develop. When pollination is incomplete and fewer drupelets develop; the berry will often crumble when it's picked.

Crumbly berry and poor fruit set can also be caused by drought, low soil fertility, insect damage, winter damage, hereditary abnormalities, variations in male and female sterility, deep cultivation and nematode infestations.

#### Managing Sterility in Brambles

Determine the cause and extent of the problem. Care must be taken to insure that the symptoms of sterility are not confused with cultural problems. If a bramble planting blooms and sets fruit well one season and then the planting has a poor crop the next season, suspect disease or insect injury to the berry cluster stems or poor pollination.

Virus problems spread in the planting more gradually from year to year. Virus-infected plants may also show leaf symptoms. If these plants are also showing sterility symptoms, drastic action may be needed. Sterility problems related to virus infections can destroy a planting; growers will not want to take any chances.

- Remove and burn plants that fail to set fruit, and dig up roots to prevent new shoots from appearing.
- Avoid replanting in the spot for several years afterward.
- Plant only state-certified plants that were from fruitful stock from reputable nurseries.
- Eliminate nearby wild brambles.
- Maintain good weed control.
- Provide a sunny and open environment for growing blackberries and raspberries.
- Apply fungicides as needed to control anthracnose disease.

(Reprinted with permission from: <u>Kentucky Fruit Facts</u>, July 2006.)

## WEATHER NOTES

#### NEW YORK CROP WEATHER SERVICE NOTES

**Week of July 24<sup>th</sup>-** It was hot and humid much of the week as high pressure dominated the region. Tropical Storm Beryl impacted extreme southeastern New York as it passed just to the south Thursday and Thursday night. On the toes of Beryl, a cold front pressed south across the area Friday. This front became stalled across the lower Hudson Valley Friday night. A wave of low pressure formed on the front to our west. As the wave of low pressure moved eastward, the frontal boundary gradually moved northward reaching as far north as the greater Capital Region. To the north of this frontal boundary very heavy rains fell Saturday, dumping generally 1 to 3 inches with portions of the western Mohawk Valley and the Lake George Saratoga region receiving 3 to 5 inches leading to flash flooding. In the Lake Ontario region, strawberry renovation was active.

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**Week of July 30<sup>th</sup>-** The week started out mainly dry with near seasonal temperatures Sunday and Monday as high pressure took residence across the area. However by Tuesday a trough of low pressure brought showers and thunderstorms to portions of central and western New York with locally heavy rainfall. Scattered showers and thunderstorms affected the state Wednesday with temperatures and humidity levels increasing as well. Another trough of low pressure brought more showers and thunderstorms late Thursday into Friday. The heaviest rain fell across western New York. A cold front sparked yet another round of showers and thunderstorms across portions of the state on Saturday. Some of the thunderstorms were severe and produced more locally heavy rainfall. The warm and humid conditions persisted through Saturday.

**Week of August 6<sup>th</sup>**- The weather was dominated by a very warm and sultry air mass which moved into the region on Monday. The air mass was unstable resulting in scattered thunderstorms, some of which contained very heavy rainfall and damaging winds. The unseasonable hot and humid weather persisted until early Thursday when cloudiness associated with an approaching front limited the heat to the lower Hudson Valley, the New York Metro Area, and Long Island. Cooler weather came to the region Friday and Saturday. Temperatures for the week averaged around 7 degrees above normal with Tuesday and Wednesday particularly oppressive with high temperatures in the mid 90's and dewpoints in the 70's. Rainfall for the week varied widely as it usually does with convection, with some sites well over two inches with hardly any at all in the New York City Metro Area or on Long Island.

**Week of August 13<sup>th</sup>-** A cold front crossed southeast New York Monday preceded and accompanied by scattered showers and thunderstorms. High pressure then moved east behind this front across the Great Lakes and off the mid-Atlantic coast Tuesday through Thursday providing slightly cooler and much less humid conditions for the region. Another cold front crossed the region Thursday afternoon and evening accompanied by showers and isolated thunderstorms. An unseasonably cool and dry air mass then moved into the region for Friday through Saturday as high pressure moved southeast out of eastern Canada into western New York State. Daily mean temperatures generally averaged 5 to 8 degrees below normal on the 12<sup>th</sup>. Rainfall for the week was focused primarily around both frontal passages. The first frontal passage on Monday led to rainfall amounts of generally less than one quarter of an inch, with many areas only receiving on tenth of an inch or less. The second cold frontal passage led to rainfall amounts of between one tenth of an inch and one quarter of an inch. However thunderstorms produced isolated rainfall amounts of over one inch across the portions of the New York City area and western Long Island.

**Week of August 20**<sup>th</sup>- The week featured seasonable summer weather with two significant cold frontal passages providing just about all the precipitation. The week started with a chilly morning on Sunday August 13<sup>th</sup> with many stations reporting temperatures in the 40's and some spots in the Adirondacks as low as the upper 30's. A quick warm up sent temperatures well into the 80's by Monday afternoon ahead of the first cold front passage. The air behind this front originated in southern not northern Canada which translated to normal temperatures Tuesday through Friday as high pressure sprawled across the state. Clouds and rain associated with the second front and low pressure region held temperatures in the 70's for many spots on Saturday. Just like last week rainfall for the week was focused primarily around both frontal passages. The first frontal passage on Monday night led to rainfall amounts of generally around a quarter of an inch. The second cold frontal passage brought the lion share of rain to the state. This front was a slow mover and produced a tropical connection that resulted in heavy rainfall across primarily central and eastern portions of New York State. Binghamton reported a record rainfall on Saturday with 2.73 inches. A general one to 3 inches of rain fell across this region with lesser amounts around half an inch noted in western New York State. Since conditions had been somewhat dry prior to this rainfall no major flooding was reported. Heavy rain continued overnight Saturday into the beginning of the next week.

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

Questions or Comments about the New York Berry News?

Send inquiries to: Ms. Cathy Heidenreich New York Berry News, Interim Editor Department of Plant Pathology New York State Agricultural Experiment Station 690 W. North Street Geneva, NY 14456 OR Email: mcm4@cornell.edu

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Growing Dogroo											
		Temp	erature		Dav	s (Base	50)	Pre	cinitati	on (incl	nes)
	High	Low	Ava	DFN <sup>1</sup>	Week	YTD <sup>2</sup>	DFN	Week	DFN	YTD	DFN
Hudson Valley	1			2		••-					21
Albanv	92	63	78	6	196	1518	232	1.53	0.83	21.5	9.12
Glens Falls	91	58	74	5	174	1266	151	3.25	2.57	22.3	10.4
Pouahkeepsie	97	63	78	7	199	1562	218	1.32	0.41	20.28	5.67
Mohawk Valley	-					-			-	-	-
Utica	90	58	75	4	174	1304	151	1.6	0.76	19.91	5.72
Champlain Valley											
Plattsburgh	94	58	75	5	176	1328	185	1.08	0.38	15.67	4.75
St. Lawrence Valley	/										
Canton	89	54	73	5	162	1235	233	0.91	0.14	12.27	0.71
Massena	90	53	73	4	162	1273	204	0.21	-0.49	12.63	2.00
Great Lakes											
Buffalo	88	61	76	5	183	1523	303	0.21	-0.48	9.81	-1.98
Colden	87	57	72	4	153	1131	155	1.72	0.95	13.9	-0.28
Niagara Falls	92	57	75	4	178	1426	193	0.2	-0.43	8.14	-3.44
Rochester	93	63	77	7	188	1524	329	0.6	0.00	13.57	3.27
Watertown	89	52	74	5	167	1256	255	0.45	0.03	11.11	1.83
Central Lakes											
Dansville	92	59	75	5	175	1313	123	2.66	2.03	14.19	2.35
Geneva	91	58	74	4	172	1303	133	1.74	1.11	14.44	2.63
Honeoye	91	56	74	2	167	1290	74	0.77	0.20	10.58	-1.00
Ithaca	92	56	74	6	170	1184	126	1.21	0.44	16.77	4.20
Penn Yan	91	57	75	5	180	1387	217	0.78	0.15	9.68	-2.13
Syracuse	92	57	77	6	188	1458	252	0.83	-0.01	19.33	6.06
Warsaw	87	58	71	5	149	1061	154	1.42	0.70	15.80	2.10
Western Plateau											
Alfred	90	52	70	3	140	976	89	2.38	1.61	14.14	0.96
Elmira	92	58	74	5	170	1199	73	1.82	1.08	15.65	3.43
Franklinville	89	53	71	6	149	1005	196	1.22	0.45	13.36	-0.42
Sinclairville	91	55	72	6	158	1130	213	0.47	-0.39	11.78	-3.40
Eastern Plateau											
Binghamton	90	57	74	5	167	1225	134	1.40	0.63	20.89	8.18
Cobleskill	91	58	74	7	170	1169	160	1.00	0.23	20.74	6.97
Morrisville	91	54	73	5	160	1069	111	1.64	0.87	25.67	12.12
Norwich	94	59	74	6	169	1157	147	2.53	1.77	21.61	7.80
Oneonta	96	60	75	8	177	1328	396	1.25	0.38	23.49	8.55
Coastal											
Bridgehampton	94	67	77	6	192	1423	242	0.44	-0.19	23.48	9.89
New York	100	71	83	7	231	2084	396	2.64	1.70	23.79	9.58

#### WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, July 24<sup>th</sup>, 2006

1. Departure from Normal

2. Year to Date: Season accumulations are for April 1st to date

NEW TORK STATE FOR WEEK ENDING SONDAT 6.00am, July 50 , 2000												
		Tomp	oraturo		Grov	Ving De	gree	Precipitation (inches)				
_	Llia h		Ave		Week							
	пıgn	LOW	AVg	DFN	week	Ϋ́́́́́	DFN	week	DFN	Ϋ́́́́	DFN	
Hudson Valley	00	50	70	-	100	1704	204	2 00	0.54	04 70	0.04	
Albany	90	56	76	5	186	1704	264	0.20	-0.51	21.70	8.61	
Glens Falls	91	58	74	5	174	1266	151	3.25	2.57	22.30	10.40	
Poughkeepsie	88	60	76	4	184	1746	241	0.78	-0.06	21.06	5.61	
Mohawk Valley												
Utica	90	58	75	4	174	1304	151	1.60	0.76	19.91	5.72	
Champlain Valley												
Plattsburgh	89	58	74	5	171	1499	215	1.06	0.30	16.73	5.05	
St. Lawrence Valle	у											
Canton	85	54	73	5	164	1399	264	0.52	-0.28	12.79	0.43	
Massena	86	54	73	4	161	1434	228	2.17	1.42	14.80	3.42	
Great Lakes												
Buffalo	87	59	76	5	182	1705	335	2.21	1.47	12.02	-0.51	
Colden	87	57	72	4	153	1131	155	1.72	0.95	13.90	-0.28	
Niagara Falls	87	55	76	6	184	1610	229	3.80	3.14	11.94	-0.30	
Rochester	89	59	77	7	194	1718	380	2.17	1.53	15.74	4.80	
Watertown	87	61	75	7	178	1434	300	0.24	-0.23	11.35	1.60	
Central Lakes												
Dansville	92	59	75	5	175	1313	123	2.66	2.03	14.19	2.35	
Geneva	91	58	74	4	172	1303	133	1.74	1.11	14.44	2.63	
Honeoye	91	56	74	2	167	1290	74	0.77	0.20	10.58	-1.00	
Ithaca	86	54	73	5	164	1348	157	1.37	0.61	18.14	4.81	
Penn Yan	87	58	75	5	178	1565	248	0.08	-0.55	9.76	-2.68	
Syracuse	92	57	77	6	188	1458	252	0.83	-0.01	19.33	6.06	
Warsaw	82	52	70	4	146	1207	181	1.84	1.08	17.64	3.18	
Western Plateau												
Alfred	83	50	69	3	133	1109	103	1.14	0.37	15.28	1.33	
Elmira	92	58	74	5	170	1199	73	1.82	1.08	15.65	3.43	
Franklinville	89	53	71	6	149	1005	196	1.22	0.45	13.36	-0.42	
Sinclairville	91	55	72	6	158	1130	213	0.47	-0.39	11.78	-3.40	
Eastern Plateau												
Binghamton	84	57	72	3	157	1382	153	1.01	0.24	21.90	8.42	
Cobleskill	87	47	72	5	155	1324	188	0.70	-0.06	21.44	6.91	
Morrisville	86	54	71	4	150	1219	135	1.95	1.18	27.62	13.30	
Norwich	87	53	72	4	154	1311	172	1.46	0.76	23.07	8.56	
Oneonta	92	54	75	8	172	1500	449	0.91	0.07	24.40	8.62	
Coastal												
Bridgehampton	88	60	76	4	182	1605	267	0.00	-0.69	23.48	9.20	
New York	94	71	82	6	227	2311	434	0.06	-0.85	23.85	8.73	

#### WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, July 30<sup>th</sup>, 2006

1. Departure from Normal

2. Year to Date: Season accumulations are for April 1st to date

					Grov	wing De	aree					
	Temperature				Day	/s (Base	÷ 50)	Precipitation (inches)				
	High	Low	Avg	<b>DFN</b> <sup>1</sup>	Week	YTD <sup>2</sup>	DFN	Week	DFN	YTD	DFN	
Hudson Valley												
Albany	90	58	73	2	162	1145	168	0.04	-0.70	18.82	7.84	
Glens Falls	86	51	69	0	136	934	99	0.05	-0.58	16.41	5.82	
Poughkeepsie	89	54	73	3	165	1185	156	0.09	-0.82	18.34	5.55	
Mohawk Valley												
Utica	85	53	68	-2	131	971	104	0.13	-0.78	15.34	2.84	
Champlain Valley												
Plattsburgh	88	53	70	1	140	983	127	0.56	-0.08	13.11	3.52	
St. Lawrence Valle	у											
Canton	83	53	69	2	136	915	173	0.05	-0.68	11.00	0.94	
Massena	84	53	69	1	133	952	157	0.00	-0.70	12.08	2.85	
Great Lakes												
Buffalo	80	56	69	-2	135	1168	247	0.03	-0.67	7.46	-3.01	
Colden	80	50	66	-2	111	838	111	0.21	-0.64	9.22	-3.40	
Niagara Falls	87	52	70	0	142	1077	142	0.22	-0.42	5.66	-4.67	
Rochester	86	54	71	2	150	1157	250	0.48	-0.15	8.25	-0.89	
Watertown	83	49	68	0	127	932	195	0.00	-0.43	9.76	1.30	
Central Lakes												
Dansville	85	50	68	-2	129	977	74	0.68	-0.07	9.13	-1.38	
Geneva	85	55	70	1	141	966	85	0.16	-0.56	9.66	-0.86	
Honeoye	84	49	68	-3	125	958	44	0.21	-0.47	7.62	-2.76	
Ithaca	83	49	67	-1	122	859	65	1.09	0.29	13.02	1.99	
Penn Yan	84	53	70	1	140	1035	154	0.15	-0.57	7.86	-2.66	
Syracuse	84	61	73	6	165	951	171	2.68	1.77	11.30	0.64	
Warsaw	78	50	65	-1	108	770	98	0.27	-0.55	11.28	-0.93	
Western Plateau												
Alfred	80	46	64	-2	101	706	50	0.87	-0.05	9.87	-1.72	
Elmira	84	48	67	-2	121	869	22	0.35	-0.47	11.84	1.13	
Franklinville	81	46	65	1	107	717	124	0.54	-0.33	9.21	-2.98	
Sinclairville	82	48	66	0	114	825	145	0.84	-0.10	9.12	-4.29	
Eastern Plateau												
Binghamton	81	54	68	-1	126	903	84	0.47	-0.37	16.85	5.68	
Cobleskill	84	52	68	2	130	843	86	0.20	-0.64	18.92	6.70	
Morrisville	84	50	66	-1	115	772	60	0.42	-0.42	20.05	8.08	
Norwich	85	49	68	1	125	841	86	0.17	-0.67	17.26	4.98	
Oneonta	88	52	70	5	140	981	287	0.42	-0.49	20.92	7.76	
Coastal												
Bridgehampton	86	60	73	3	160	1060	184	2.33	1.63	22.57	10.28	
New York	92	64	79	4	205	1639	324	1.40	0.49	19.30	6.95	

#### WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, August 6<sup>th</sup>, 2006

1. Departure from Normal

2. Year to Date: Season accumulations are for April 1st to date

#### WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, August 13<sup>th</sup>, 2006

		Temp	erature		Grov Day	ving De /s ( <i>Base</i>	egree e <i>50</i> )	Precipitation (inches)			
	High	Low	Avg	<b>DFN</b> <sup>1</sup>	Week	YTD <sup>2</sup>	DFN	Week	DFN	YTD	DFN
Hudson Valley											
Albany	87	47	69	-3	134	2031	292	0.27	-0.50	22.69	8.06
Glens Falls	86	41	64	-5	102	1704	181	0.41	-0.42	23.92	9.71
Poughkeepsie	89	48	71	-1	148	2109	293	0.04	-0.80	21.73	4.60
Mohawk Valley											
Utica	84	45	66	-4	111	1761	183	0.14	-0.70	23.02	6.37
Champlain Valley											
Plattsburgh	87	49	67	-2	121	1789	237	0.04	-0.89	18.03	4.56
St. Lawrence Valle	у										
Canton	84	40	64	-4	99	1662	280	0.08	-0.83	13.19	-0.95
Massena	84	46	65	-3	110	1710	246	0.21	-0.63	17.5	4.50
Great Lakes											
Buffalo	86	51	68	-2	131	2032	374	0.01	-0.92	12.52	-1.78
Colden	82	45	63	-5	90	1535	189	0.47	-0.41	17.04	0.36
Niagara Falls	86	50	68	-2	129	1935	267	0.00	-0.85	12.93	-0.93
Rochester	86	50	69	0	134	2054	445	0.07	-0.70	17.06	4.64
Watertown	84	39	65	-3	110	1719	326	0.00	-0.69	11.36	0.32
Central Lakes											
Dansville	86	46	65	-5	106	1772	159	0	-0.70	16.44	2.60
Geneva	84	49	66	-4	113	1768	170	0.00	-0.70	15.90	2.12
Honeoye	85	43	66	-5	112	1756	95	0.07	-0.63	13.43	-0.14
Ithaca	85	44	64	-5	101	1625	176	0.00	-0.77	18.61	3.74
Penn Yan	86	50	68	-2	127	1885	287	0.00	-0.70	10.44	-3.34
Syracuse	85	51	68	-2	127	1966	336	0.65	-0.12	22.84	7.19
Warsaw	81	46	63	-4	93	1462	210	0.04	-0.80	19.38	3.29
Western Plateau											
Alfred	82	38	62	-5	83	1356	124	0.00	-0.77	15.58	0.09
Elmira	85	41	64	-5	102	1646	111	0.04	-0.63	17.31	3.02
Franklinville	82	39	62	-3	84	1393	266	0.03	-0.84	15.24	-1.04
Sinclairville	85	43	64	-3	101	1563	296	0.00	-0.98	14.41	-3.58
Eastern Plateau											
Binghamton	83	48	66	-3	112	1673	182	0.07	-0.65	22.04	7.07
Cobleskill	85	42	65	-3	105	1603	220	0.03	-0.74	22.55	6.48
Morrisville	80	45	63	-5	92	1479	159	0.20	-0.57	29.41	13.55
Norwich	86	44	64	-3	102	1588	202	0.21	-0.52	23.73	7.79
Oneonta	88	46	68	3	129	1825	543	0.05	-0.79	24.71	7.25
Coastal											
Bridgehampton	87	49	72	0	154	1984	338	0.00	-0.77	23.48	7.73
New York	90	65	78	2	194	2770	521	1.91	1.07	25.76	8.92

1. Departure from Normal

2. Year to Date: Season accumulations are for April 1st to date

Crowing Degree												
		Tomp	araturo		Grov	Ving De	gree	Bre	ainitati	an (incl		
		1 emp	erature		Day	S (Dase	2 50j		Scipitati		iesj	
	Hign	Low	Avg	DFN	Week	YID	DFN	Week	DFN	YID	DFN	
Hudson valley	0.6	52	70	2	154	2105	200	1.62	0.0	24.22	2.96	
Albany	86	53	12	5	154	2185	308	1.63	0.8	24.32	8.86	
Glens Falls	83	45	68	1	125	1829	184	0.76	-0.08	24.68	9.63	
Poughkeepsie Mohawk Valley	89	52	73	3	163	2272	311	1.82	1.03	23.55	5.63	
Utica	84	51	69	1	132	1893	187	1.18	0.34	24.2	6.71	
Champlain Valley												
Plattsburgh	85	51	70	4	144	1933	260	0.74	-0.24	18.77	4.32	
St. Lawrence Valley	/											
Canton	87	52	70	5	141	1803	307	0.25	-0.73	13.44	-1.68	
Massena	86	51	69	4	138	1848	268	0.26	-0.58	17.76	3.92	
Great Lakes												
Buffalo	85	55	71	3	150	2182	391	0.68	-0.3	13.2	-2.08	
Colden	82	47	66	-1	112	1647	190	1.18	0.25	18.22	0.61	
Niagara Falls	85	55	70	2	144	2079	279	0.74	-0.17	13.67	-1.1	
Rochester	88	55	72	5	155	2209	475	0.43	-0.34	17.49	4.3	
Watertown	86	51	70	4	139	1858	347	0.39	-0.38	11.75	-0.06	
Central Lakes												
Dansville	87	46	67	-2	125	1897	154	1.05	0.32	17.49	2.92	
Geneva	87	51	68	-1	127	1895	167	0.73	0.03	16.63	2.15	
Honeoye	84	48	68	-2	128	1884	86	0.54	-0.21	13.97	-0.35	
Ithaca	84	47	68	2	124	1749	182	1.77	1	20.38	4.74	
Penn Yan	84	54	70	2	142	2027	299	1.22	0.52	11.66	-2.82	
Syracuse	86	54	71	3	147	2113	354	0.6	-0.17	23.44	7.02	
Warsaw	81	49	66	2	111	1573	218	1.16	0.27	20.54	3.56	
Western Plateau												
Alfred	83	43	63	-2	95	1451	116	1.64	0.83	17.22	0.92	
Elmira	88	46	69	2	132	1778	119	1.88	1.2	19.19	4.22	
Franklinville	82	46	65	2	104	1493	271	1.4	0.49	16.64	-0.55	
Sinclairville	84	45	66	2	116	1679	306	0.7	-0.32	15.11	-3.9	
Eastern Plateau												
Binghamton	80	53	68	2	128	1801	189	3.15	2.38	25.19	9.45	
Cobleskill	82	49	67	2	123	1726	228	1.25	0.48	23.8	6.96	
Morrisville	84	50	67	2	119	1598	170	1.5	0.7	30.91	14.25	
Norwich	83	45	66	0	116	1704	204	1.92	1.15	25.65	8.94	
Oneonta	86	50	70	5	139	1964	578	1.33	0.49	26.04	7.74	
Coastal												
Bridgehampton	83	53	71	0	150	2134	340	1.52	0.75	25	8.48	
New York	89	71	79	4	201	2971	545	0.18	-0.66	25.94	8.26	

#### WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, August 20<sup>th</sup>, 2006

1. Departure from Normal

2. Year to Date: Season accumulations are for April 1st to date