New York Berry News

CORNELL UNIVERSITY

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What's Inside

CURRANT EVENTS

August 11-12, 2009. *NASGA 2009 Summer Tour* with stops in Michigan, Illinois, Indiana and Wisconsin. (see flyer that follows for details).

July 14-16, 2009. *Plasticulture 2009*. Ramada Inn and Penn State University, State College, PA. For more information visit www.plasticulture.org.

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.

NY FARM VIABILITY SEEKS FARMERS TO REVIEW GRANT PROPOSALS

New York Ag Connection - 04/16/2009. New York farmers and agricultural producers are encouraged to put their knowledge and leadership to work by reviewing project proposals submitted to the New York Farm Viability Institute's grant programs.

The New York Farm Viability Institute is a nonprofit, farmer-led organization that awards funds for research and outreach projects that help increase profits on New York farms. The Institute supports projects that focus on business management, marketing, production issues, technology adoption, outreach education and more across the diverse agricultural sectors, farm sizes and production practices in the state.

Grants are awarded through a competitive application process. Proposals are reviewed and ranked by farmers within the related agricultural sector. An all-farmer board of directors makes the final funding decisions.

All funded projects must include farmer participation, such as identifying needs, developing the project, implementing research or evaluation success.

Most funded projects last for two years.

In late 2005, the Institute awarded grant funds to 33 projects that worked with more than 900 farmers, and produced a farm-level impact of more than $35 million: $9.5 million in annual farm business savings, $13 million in new annual sales, and $12 million in capital investments.

The New York Farm Viability Institute seeks farmers for the following grant proposal review panels: bioenergy, fruit, vegetables, livestock, dairy, green industry, and field crops.

New review panels are created as the volume of applications within that agricultural sector or commodity warrants them. Review panels will meet, in person or via phone conference, this spring and summer. Nominal stipends are available. Applicants for review panels may be asked to participate in a selection interview. For more information about becoming a proposal reviewer, contact New York Farm Viability Institute at (315) 453-3823.

The New York Farm Viability Institute receives funding through legislative appropriation to the New York State Department of Agriculture and Markets. For more information, visit www.nyfvi.org.

CNAL TRANSITION TO DAIRY ONE FORAGE AND SOILS LAB

The transition of the CNAL to Agro One is in full swing with a July 1 target in place. Right now there are a lot of soil samples going back and forth between the two labs as we nail down procedures and compare results. Cornell & Dairy One programmers are also working on the logistics of generating reports and recommendations. We plan to offer web based access to results and recommendations in addition to the regular US Mail, fax and internet reports. We are also exploring options that will streamline sample information sheets for customers and facilitate efficient and accurate data entry when samples arrive at 730 Warren Road.

A transition team has been formed to oversee this transition. The full team is planned to become engaged in the next weeks. Please feel free to convey your questions and suggestions to team members so we can include them in future discussions.

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COMMISSIONER REMINDS FARMERS TO ONLY SELL TO LICENSED DEALERS

Agricultural Producers Security Law Protects Farmers from Nonpayment

May 4, 2009. New York State Agriculture Commissioner Patrick Hooker today reminded producers of farm products to only sell to licensed farm product dealers and to promptly report to the Department any dealer who does not pay for farm products. This reminder highlights the provisions contained in Article 20 of the New York State Agriculture and Markets Law, more commonly known as the Agricultural Producers Security Law.

The Department is able to offer financial protections to our producers in the event of nonpayment under the Agricultural Producers Security Law, the Commissioner said. The catch is that farmers must make sure they are selling their products to a licensed dealer. It is also important that producers notify the Department immediately in order to preserve their rights under the law. Therefore, I recommend that all farmers to become familiar with the details of the Agricultural Producers Security Law so they can be assured of their protections in a swift and effective manner.

Farm product dealers are required to be licensed with the Department of Agriculture and Markets. Dealers' licenses expire on April 30 of each year and must be renewed for the license year beginning May 1. The State Department of Agriculture and Markets maintains a current list of licensed dealers on the Departments website at www.agmkt.state.ny.us/programs/apsf.html and will provide a hard copy upon request.
Article 20 of the New York State Agriculture and Markets Law provides financial protection for farmers against nonpayment for their products sold to licensed dealers. This financial protection consists of security in the form of a bond or letter of credit furnished by the dealer, and supplemental financial coverage from the Agricultural Producers Security Fund, which is funded by licensed dealers. In order to preserve a producers' eligibility for the financial protections available under the Agricultural Producers Security Law, producers must:

1. Sell only to licensed dealers. Only sales to licensed dealers are covered under Article 20. The dealer must be licensed at the time of the transaction.

2. Ensure that the sale of farm products for which a claim is made has occurred within 120 days after the earliest unpaid transaction between the producer and the dealer that remains unpaid as of the date the claim is filed, whether or not that earliest unpaid transaction is included in the claim.

3. File claims of nonpayment must be filed with the Department no later than 365 days after the sale and delivery of the farm products. In the event the Department has issued a notice to file claims, they must be submitted by the date specified in the published notice without regard to the 365-day time frame.

A producer can also take advantage of Article 20s trust provision, a legal mechanism that holds a dealer responsible for the full amount owed to a producer. The Article 20 Trust is established upon delivery of the producer's farm products to a dealer and ends once the amount due is fully paid. The trust assets are the farm products and the proceeds from the sale of those farm products. To take advantage of the Article 20 Trust, a producer must provide a written notice to the dealer within 60 days from the date when payment is due informing the dealer that the producer is electing the trust benefit. The written notice must provide details of the transaction, including the dealers name, transaction date, product sold, quantity, price per unit, amount owed and the date payment is due. As a practical matter, a producer may wish to provide written notice to a dealer on the invoice itself.

The Department recommends that producers consult with their attorney concerning matters involving preservation of their trust benefit, or to enforce the trust.

For up-to-date information about the law, a copy of the brochure or a list of licensed dealers, please visit the Departments website at http://www.agmkt.state.ny.us/programs/apsf.html, or call the Department at 1-800-554-4501 or directly at 518-457-1954.

NEW PUBLICATION: USING ORGANIC NUTRIENT SOURCES

Elsa Sánchez, Penn State Horticulture

The publication "*Using Organic Nutrient Sources*" is now available through Penn State Cooperative Extension. The publication is intended to help growers interpret soil test recommendations for using organic nutrient sources. Topics included are:

- USDA National Organic Standards Summary on Soil Fertility Management
- National Organic Standards Summary for Fertilizers and Soil Amendments Use
- When Nutrient Levels Exceed Crop Needs
- Balance and Imbalance of Nutrients in Organic Nutrient Sources
- Nutrient Availability from Organic Nutrient Sources
- Increasing Soil pH, Calcium, Magnesium Levels Decreasing Soil pH
- Recommendations for Nitrogen, Phosphate, and Potash
- Soil Organic Matter Content
- Mineralization
- Using Compost
- Using Manure
- Additional Sources for Information

The publication can be ordered through: The Publications Distribution Center, College of Agricultural Sciences, The Pennsylvania State University, 112 Agricultural Administration Building, University Park, PA 16802-2602. Phone: 814-865-6713. Fax: 814-863-5560. Internet: http://pubs.cas.psu.edu/Publications.asp. E-mail: AgPubsDist@psu.edu.

It is also available as a pdf at http://pubs.cas.psu.edu/FreePubs/pdfs/uj256.pdf.

NEW INTERACTIVE ONLINE IPM TRAINING TOOL

Janice LeBoeuf, Ontario Ministry of Agriculture, Food & Rural Affairs, Vegetable Crop Specialist

We are very excited to announce that Ontario cropIPM, our interactive IPM training program is now online! You can find it in English at http://www.omafra.gov.on.ca/IPM/english/index.html, and in French at http://www.omafra.gov.on.ca/IPM/french/index.html.

Ontario CropIPM is an interactive educational tool to improve your knowledge of Integrated Pest Management in Ontario crops. Growers, scouts and consultants will be able to learn about insects, diseases, disorders, and weeds by:

- searching photo galleries,
- using identification keys,
- consulting pest scouting calendars,
- comparing photos of often-confused pests,
- learning about soil diagnostics and herbicide injury,
- referring to glossaries, and
- checking additional resources.

Ontario CropIPM includes modules for: Brassicas, Cucurbits, Peppers, Strawberries, Sweet corn, and Tomatoes. We expect to be adding more crops as time goes on. The CD version is available for purchase. This is nice for those who don't have high-speed internet access.

USDA TO CONDUCT FIRST WIDE-SCALE SURVEY OF ORGANIC PRODUCERS

The 2007 Census of Agriculture counted over 20,000 U.S. farms engaged in organic production. To learn more about how the growth of organic farming is changing the face of U.S. agriculture, the USDA's National Agricultural Statistics Service (NASS) will soon conduct its first wide-scale survey of organic agricultural producers and producers in transition to organic agriculture.

"The Organic Production Survey comes in direct response to the growing interest in organics among consumers, farmers, businesses and others," said Stephen Ropel, director of the NASS New York Field Office. "This is an opportunity for organic producers to share their voices and help ensure the continued growth and sustainability of organic production in the United States."

The survey will look at many aspects of organic agriculture during the 2008 calendar year - from production and marketing practices, to income and expenses." The results will help shape future decisions regarding farm policy, funding allocations, availability of goods and services, community development and other key issues," Ropel noted. "In addition, the information can help organic producers make informed decisions about the future of their own farming operations."

NASS will mail the Organic Production Survey in early May to all known organic producers in the United States. They are required to respond by June 17. Results are expected to be available in late 2009."Participants can mail back their forms, but we encourage them to complete the survey online at www.agcensus.usda.gov. It's convenient, it's secure, and it saves the government money on return postage and data entry," Ropel said.

Survey participants are guaranteed by law (Title 7, U.S. Code) that their individual information will be kept confidential. NASS uses the information only for statistical purposes and publishes data only in tabulated totals.

For more information about the Organic Production Survey, visit www.agcensus.usda.gov or call (800) 727-9540.

DAY-NEUTRAL STRAWBERRY VARIETIES – RESEARCH RESULTS

Kathy Demchak, Penn State Horticulture, Willie Lantz, Maryland Cooperative Extension and Harry Swartz, University of Maryland Horticulture

During 2008, two variety trials on day-neutral strawberries were conducted. One took place at Penn State's Horticulture Research Farm at Rock Springs, PA and the other at Harry Swartz's farm in Garrett Co., MD. Here's a synopsis of the trials and plant performance.

Plants were grown on plastic-mulched raised beds, and were planted on June 6 in PA (late due to wet soils) and on May 7 in MD. The main plant source was plug plants which were grown in Maryland, originating as dormant plants that were trimmed and grown in plug plant trays. With the cultivar Evie 2 in the PA trial, dormant plants were also planted for comparison to plug plants. Yields were low relative to normal yields for the PA site, perhaps due to a combination of late planting date and using black plastic instead of reflective plastic this year.

'Seascape' was included as the current industry standard for day-neutrals. It was a consistent performer in the trials, and was the highest yielder in the MD trial. This variety has notable sweetness, a nice red color, and average size. It can be susceptible to powdery mildew, and tends to split when it rains.
'Tristar' was also included as an industry standard in MD. Compared to 'Seascape', it produced 1/3 less fruit, and had smaller berries (8.9 g for 'Tristar', 12.5 g for 'Seascape').

'Albion' had similar yields to 'Seascape' in PA, but yields were low in the MD trial. In PA, this berry could have passed for a 'Camarosa' that decided to be a day-neutral. It was large (mostly long), firm, had a perfect berry color, and good (but not great) flavor. It had the highest percentage of marketable fruit of all, being the only one that didn't split in the rain. Even though it was a bit too firm, the size alone makes it worth trying.

'Everest', **'Evie 2'**, and **'Evie 3'** had very similar berry quality. All were fairly soft, medium-red colored, and flavor was average, reminiscent of the June-bearing 'Latestar'. In PA, 'Everest' and 'Evie 3' were the two highest producers in the trial at 1.16 and 1.01 pounds of marketable fruit per plant. 'Evie 2' had greatly improved berry size over 'Everest' and 'Evie 3' at both sites, but yields were low. Plug plants and dormant plants of 'Evie 2' had nearly identical yields, but yields were shifted to later in the season when dormant plants were used.

A few **numbered selections** were tried. One in particular from Five Aces Breeding has *Fragaria moschata* (musk strawberry) in its background. It produced yields that would be marketably high, but berries tended to have a flattened shape. There was a range of preferences for the flavor. A numbered selection from the USDA-Beltsville breeding program appeared to have some real potential, but there were only enough plants for the MD site, so another look would be in order before reaching conclusions.

For those wanting more information on the trial, results will be discussed at the Mid-Atlantic Fruit and Vegetable Convention. Also, additional results and details on plant establishment will be posted shortly on the NE SARE Web site in an annual report for this trial, along with other annual reports that are already posted. Info is at http://www.sare.org/reporting/report_viewer.asp?pn=LNE06-241.

This research is part of the project "An Integrated Approach to Developing a Day-Neutral Strawberry Production Industry", LNE06-241 and is funded through NE SARE.

(Reprinted with permission from: The Vegetable & Small Fruit Gazette, February 2009, Volume 13, No. 2)

BERRY WORKSHOP ENCOURAGES FARMER-TO-FARMER EXCHANGE

Janet L. Aldrich, Extension Program Educator, Cornell Cooperative Extension of Delaware County

Forty-three berry growers attended the April 6, 2009 Regional Berry Workshop held at Cornell Cooperative Extension in Delaware County. Sunset View Farm in Unadilla, NY, hosted the blueberry pruning demonstration given by Dr. Marvin Pritts. The Donnelly Farm of Walton hosted the boom sprayer calibration given by Laura McDermott, Extension Berry Specialist for Eastern New York.

On this cold, misty day, participants drove twenty miles to the blueberry fields of Sunset View Farm. Owned by Ray and Janet Lewis and managed by Bryan and Betsy Babcock (Handsome Brook Farm of Franklin, NY, www.handsomebrookfarm.com), this field had not been actively pruned for seven years. Over 800 highbush blueberry plants were in need of heavy pruning. Dr. Marvin Pritts demonstrated how to prune blueberries and make critical decisions on neglected plants. The hands-on portion took only an hour and one participant noted: "I learned more here today than I did during the lectures and other reading I've done." Catherine Heidenreich Cornell Berry Specialist for Western New York, and Laura McDermott also worked one-on-one with the growers.

Workshop participants were invited to come back to the farm a week later where they would have a chance to make a real impact on the berry field. As incentive they were offered an afternoon of free picking during the season. In response, six intrepid souls spent four hours on April 13, and, under the guidance of Extension Educator Janet Aldrich, approximately 3/4s of the field was pruned. They found working together with a common interest was not only fun, but may have begun the makings of a berry growers group working together to produce and market berries in Delaware County.

Hands-on demonstrations in Extension's workshops are key, not only in taking what was learned in the lectures that one step forward to actual practice, but in the networking among growers who are facing the same issues and challenges. The conversations that were exchanged at this follow-up pruning day promise a real farmer-to-farmer exchange of help, both in production and marketing.

Acknowledgements: *This regional berry pruning workshop was supported by a grant from the New York Farm Viability Institute.*

2007 CENSUS OF AGRICULTURE PROVIDES SNAPSHOT OF U.S. FRUIT AND TREE NUT INDUSTRIES

The 2007 Census of Agriculture, released in February 2009, showed that the number of farms growing tree fruit, vine fruit, berries, and tree nuts, increased 2 percent in 2007 to 112,690 farms from the last Census in 2002 (the term fruit and tree nut farms will be used to refer to all these commodities throughout the paper).

At the same time, however, the number of acres planted to tree fruit, vine fruit, and tree nuts fell 6 percent to 5.03 million acres. Harvested berry area increased 3 percent to 209,790 acres.

California remains the No.1 State for fruit, tree nut, and berry farms. With 34 percent of the total, it accounts for far more farms than the No. 2 State, Florida, with 8 percent of the total. Topping off the remaining five States with the most farms are: Texas-6 percent, Washington-5 percent, and Oregon-4 percent.

The value of sales for fruit, tree nuts, and berries in 2007 totaled $18.6 billion, the highest of any agricultural industry except total grains, oilseeds, dry beans, and dry peas. The fruit and tree nuts industries accounted for 6 percent of the total sales valued at $297 billion for all agricultural commodities sold in 2007.

Most Farms Are Family or Individual Operations

Fruit and tree nut farms are predominantly family or individual operations. On the national level, 80 percent of the farms are run by families or individuals. Only 8 percent are run by corporations. South Dakota has the largest share of corporate run farms, with 26 percent of their 61 farms reported as part of a corporation; most of these are family-held. Individual State laws and earnings from sales may contribute to farms incorporating themselves, explaining why some States may have a higher share than others.

About 26 percent of all farms growing fruit and tree nuts had sales of $50,000 or more. Washington had 44 percent of its farms and California had 40 percent in this category, the most of any States. About one-third of the farms in Oregon, Michigan, and Florida fit into this category. A bigger share of farms with sales of at least $50,000 in 2007 were organized as a corporation but compared with the total fruit and tree nuts farms, still 58 percent were family or individually operated.

Among the 20 percent that were in corporations, 82 percent were family held with 10 or fewer stockholders. About 2 percent of these farms were corporations other than family. Almost all of these farms were in California, Florida, and Washington.

About 82 percent of all fruit and tree nut farms are small, family operations. About 11 percent of this group was limited resource farmers, almost a quarter of whom were located in California with the remainder dispersed throughout the country.

Another 27 percent were retirement or residential/lifestyle farms. These growers, however, likely had other sources of income and were less dependent on their sales from fruit and tree nuts. Small family farms with farming as their major occupation accounted for 17 percent of all fruit and tree nut farms. Only 9 percent of these farms were defined as nonfamily farms.

While the farms with sales of at least $50,000 accounted for only about a quarter of all fruit and tree nut farms, their sales accounted for 95 percent of all sales for these growers, generating $18 billion of sales in 2007. Returns were further concentrated among the large to very large family farms and nonfamily farms.

Having the majority of fruit, tree nut, and berry farms as small, family operations, it is not surprising to find that among the 112,690 farms that produce these products, only 4,711 had sales of $1 million or more. Another 8,900 farms had sales between $250,000 and $999,000. The remaining 99,039 farms had sales of less than $250,000.

Characteristics of Farms Classified as Fruit and Tree Nut Farms

The number of farms classified as fruit and tree nut farms under the North American Industry Classification System (NAICS) totaled 98,281 in 2007, 87 percent of the farms that were reported to grow these commodities. Due to the particular nature of growing fruit, nut trees, and fruit vines, where land needs to be dedicated to the production of these crops for many years, as well as production practices that are specific to these crops, producers tend to concentrate their production in growing these crops. Some growers also plant other agricultural crops and/or have some livestock. However, the returns from these enterprises, on average, account for only a small part of total sales for these farms.

Because they are heavily reliant on the production of fruit and tree nuts, these operations do not receive many government payments. In 2007, only 6,729 fruit, tree nut, or berry farms reported receiving government payments, which were valued at $59 million. The only agricultural industries to receive lower payments were the greenhouse, nursery, and floriculture industry; tobacco; and sheep and goat farming industries. Fruit and tree nut farms were not very likely to participate in Federal conservation practice programs, such as the Conservation Reserve, Wetlands Reserve, Farmable Wetlands, or Conservation Reserve Enhancement programs, and only about 20 percent of the farms had land enrolled in crop insurance programs. Crop insurance is not available for all fruit and tree nut crops, reducing the number of those farms eligible to participate.

Farm expense took up a big portion of total market value of the total agricultural products sold and government payments received by NAICS fruit and tree nut farms. Of the total $18.4 billion received by these producers, 76 percent went to production expenses. The single biggest expense for these operations was hired labor costs, which accounted for 25 percent of all production expenditures. Fruit operations, in particular, rely heavily on labor for harvesting and other production practices. Since the fresh market is the first choice for many fruit producers, hand picking insures minimal damage to the fruit, insuring a greater share of the crop will meet the qualifications for selling in the fresh market. Shaking fruit trees mechanically would bruise too many of the fruit. While there are growers who produce for processing, there are few machines available because of the cost of making specific shakers. Mechanized harvesters would have to be different for citrus trees than noncitrus trees, because, on citrus trees, the following season's crop is already forming on the trees that are being harvested. Tree shakers are used for nut trees since the nuts are protected by a hard shell. Other major expenses incurred in fruit and tree nut operations include the purchase of chemicals; fertilizer, lime, and soil conditioners; depreciation; supplies, repairs, and maintenance; utilities; gasoline, fuels, and oils; interest payments; and property taxes.

Almost all of the capital assets on fruit and nut farms were in land and buildings. Machinery and equipment accounted for only about 5 percent of the total. Most of the producers own the land on which they plant their orchards or vines. About 96 percent of the farms and 99 percent of the acreage in fruit and nut production is owned by the operators.

Most Orchard Acreage Planted to Noncitrus Fruit and Nut Trees

Acres planted to noncitrus and tree nut crops accounted for 80 percent of all orchard acreage in 2007, with citrus accounting for the remaining 16 percent (*Table 16)*.

With the expansion of tree nut production in the United States, especially of almond production in California, it is not surprising that tree nuts accounted for 37 percent of all orchard acreage.
While there are noncitrus fruit planted in each of the 50 States, citrus production is limited to California, Arizona, and the Gulf Coast States due to their subtropical climate. Tree nut acreage is concentrated in California, but pecan acreage is reported in 15 southern States.

As has already been mentioned, most fruit farms are small, family-run operations. Production, however, is concentrated among the big orchards, which produce the bulk of the fruit. The 2007 Census of Agriculture reports that there were 608 farms in 2007 that had 1,000 or more acres and accounted for 31 percent of the acreage.

Farms in this category increased 4 percent from the 2002 Census, however, the concentration of acreage increased 3 percent. Only 16 States had farms with at least 1,000 acres of fruit and tree nut production, with California accounting for 60 percent of the farms. While the number of farms in California in this category grew between the two Census years, as it did in several other States, Florida experienced a 25-percent decline in farms and number of acres. Florida, mostly a citrus producer, lost production due to hurricane damage and disease. Only 6 States had fruit and tree nut farms with at least 3,000 acres—California, Florida, Washington, Texas, Georgia, and Arizona. Only 1 farm in Arizona was reported to have at least 3,000 acres in orchard, 2 farms in Georgia and Texas, and 7 in Washington. Florida had 37 farms with at least 3,000 acres while California had the most, 78 farms. The acreage from these 131 farms accounted for 16 percent of all land in orchards.

More Farms and Acreage in Berries in 2007

The U.S. berry industry grew as there were more farms and acres in berry production in 2007 than in 2002. Over this period, the sum of all the farms with harvested acreage across all berry crops increased 20 percent while the total for harvested acres rose 3 percent (*Table 23*). Harvested farm numbers increased for most berry crops, except for boysenberries, cranberries, and loganberries. These three crops combined made up only 5 percent of all the berry farms with harvested acres. More than half the number of berry farms in 2007 produced strawberries and blueberries, with increases of 15 percent and 17 percent from 2002. However, farm numbers for other less produced berries such as currants, raspberries, and blackberries (including dewberries) experienced bigger increases over the same period.

U.S. and State total farms and acres (includes harvested and not harvested) with berries were reported for the first time in the 2007 Census of Agriculture. In previous census years, berry data was only reported for harvested and not harvested farms and acreage. U.S. berry farms totaled 25,017 in 2007 with production covering 261,733 acres.

The overall growth in harvested berry acreage is attributed mostly to the expansion in tame (cultivated) blueberry acres, from 52,002 acres in 2002 to 60,353 acres in 2007. Harvested acres for wild blueberries declined from 2 percent between the two censuses. The only other berry crop with more harvested acres reported in 2007 was blackberries (including dewberries). Although U.S. cultivated blueberry production averages only slightly over one-tenth of the annual strawberry crop size, harvested blueberry acres is now bigger than for strawberries. Harvested acres for cultivated blueberries exceeded those for strawberries by 4,752 acres in 2007. In 2002, harvested strawberry acreage exceeded blueberry acreage by 3,864 acres.

Among all the berry crops produced in the United States, strawberries account for the largest annual production volume. Ninety-percent of the 8,638 U.S. strawberry farms in 2007 harvested strawberries on a total of 55,601 acres. These farms produced an estimated 1.2 million tons of strawberries in 2007 valued at $1.7 billion, next to grapes and apples in total noncitrus fruit crop value with a 15- percent share, based on annual NASS data. While production is present across the country, nearly 90 percent of the U.S. strawberry crop comes from California, another 8 percent from Florida, and most of the remaining volume from Oregon.

Overall, U.S. strawberry farms with harvested acres increased 15 percent in 2007 from the previous census year while harvested acres declined by only a fraction even though California's acreage increased 6 percent (table 24). Both harvested farm numbers and acres in Florida and Oregon declined over the same period. Harvested farm numbers also declined in Texas, South Dakota, Mississippi, Georgia, and Delaware, while many other minor producing States experienced significantly reduced harvested acres in 2007. On the other hand, California's harvested farm numbers and acres both increased moderately in 2007. California housed only 9 percent of all the harvested strawberry farms in 2007 but accounted for 61 percent of total harvested strawberry acreage.

Harvested cranberry acres ranked third among the berry crops in 2007, following blueberries and strawberries. Harvested area for cranberries totaled 38,597 acres in 2007, 18 percent of the total harvested acres for berries. There were 1,134 farms growing cranberries in 2007, and of these farms 96 percent harvested a crop that year. Harvested farm numbers and acreage for cranberries in 2007 declined 1 percent and 5 percent, respectively, from 2002. These declines partly reflect adjustments made by the U.S. cranberry industry in response to the supply glut situation that occurred during the late 1990's through early 2000s. While the industry has now recovered from this situation, some of the declines in harvested acres during 2007 may be attributed to the renovation of a number of cranberry bogs in recent years that had temporarily left some acreage out of production.

Table 16 --Number of Fruit and Nut Farms and Acreage in the United States, 2002 and 2007

Commodity	Total farms 2002	Total farms 2007	Percent Change 2002-07	Share of total farms 2007	Total acres 2002	Total acres 2007	Percent Change 2002-07	Share of total acreage 2007
Tree Fruit			*--percent--*				*--percent--*	
Noncitrus	67,113	72,757	8.4	62.8	2,322,905	2,176,511	-6.3	43.2
Apples	23,853	25,591	7.3	22.1	464,025	398,770	-14.1	7.9
Apricots	2,698	3,141	16.4	2.7	18,191	13,750	-24.4	0.3
Avocados	6,254	8,245	31.8	7.1	75,570	82,647	9.4	1.6
Bananas	765	1,326	73.3	1.1	1,975	2,547	29.0	0.1
Sweet cherries	8,043	8,051	0.1	6.9	91,735	100,705	9.8	2.0
Tart cherries	2,955	3,028	2.5	2.6	47,138	49,561	5.1	1.0
Cherries, not specified	--	--	--	--	--	--	--	--
Coffee	1,202	1,521	26.5	1.3	7,986	7,891	-1.2	0.2
Dates	209	168	-19.6	0.1	7,585	7,669	1.1	0.2
Figs	812	1,101	35.6	0.91	4,274	9,739	-31.8	0.2
Grapes	23,856	25,892	8.5	22.3	1,060,295	1,051,407	-0.8	20.9
Guava	308	487	58.1	0.4	1,213	883	-27.2	0.0
Kiwifruit	474	430	-9.3	0.4	4,984	4,509	-9.5	0.1
Mangoes	623	877	40.8	0.8	1,938	2,259	16.6	0.0
Nectarines	2,261	2,269	0.4	2.0	45,645	31,846	-30.2	0.6
Olives	1,549	1,696	9.5	1.5	39,591	39,540	-0.1	0.8
Papayas	451	586	29.9	0.5	3,001	2,501	-16.7	0.0
Passion fruit	66	129	95.5	0.1	53	93	75.5	0.0
Peaches	14,526	13,582	-6.5	11.7	84,495	149,237	-19.1	3.0
Pears	10,809	9,878	-8.6	8.5	80,801	8,216	-15.6	1.4
Persimmons	1,425	1,505	5.6	1.3	4,855	4,191	-13.7	0.1
Pluots	--	308	--	0.3	--	4,332	--	0.1
Plums/prunes	7,300	6,987	-4.3	6.0	148,839	109,319	-26.6	2.2
Pomegranates	369	599	62.3	0.5	9,535	24,517	157.1	0.5
Other noncitrus	1,640	4,866	196.7	4.2	9,184	10,383	13.1	0.2
Citrus	17,727	15,658	-11.7	13.5	1,279,324	1,005,806	-21.4	20.0
Grapefruit	4,006	2,923	-27.0	2.5	156,869	102,578	-34.6	2.0
Kumquats	114	154	35.1	0.1	192	183	-4.7	0.0
Lemons	2,142	2,607	21.7	2.2	80,898	66,972	-17.2	1.3
Limes	633	862	36.2	0.7	1,368	1,251	-8.6	0.0
Oranges	14,288	12,116	-15.2	10.5	987,743	785,856	-20.4	15.6
Tangelos	961	800	-16.8	0.7	14,382	9,694	-32.6	0.2
Tangerines	1,731	1,976	14.2	1.7	31,419	36,965	17.7	0.7
Honey tangerines	--	--	--	--	--	--	--	--
Other tangerines	--	--	--	--	--	--	--	--
Temples	345	116	-66.4	0.1	3,678	1,211	-67.1	0.0
Other citrus	461	407	-11.7	0.4	2,624	1,097	-58.2	0.0
Tree Nuts								
Tree nuts	--	39,480	--	34.1	--	1,857,179	--	36.9
Almonds	6,482	6,700	3.4	5.8	696,635	790,245	13.4	15.7
Chestnuts	--	1,200	--	1.0	--	3,335	--	0.1
Filberts (hazelnuts)	1,231	1,557	26.5	1.3	33,801	34,465	2.0	0.7
Macadamia nuts	1,059	1,150	8.6	1.0	18,682	17,811	-4.7	0.4
Pecans	22,371	21,856	-2.3	18.9	545,344	581,809	6.7	11.5
Pistachios	1,320	1,306	-1.1	1.1	126,569	154,103	21.8	3.1
English walnuts	7,025	7,161	1.9	6.2	292,691	267,751	-8.5	5.3
Other nuts	--	1,302	--	1.1	--	7,661	--	0.2
Other fruit and nuts	--	--	--	--	--	--	--	--
Total land in orchards 1/	113,649	115,935	2.0	110.3	5,330,439	5,039,476	-5.5	100.0
Berries								
Blackberries & dew berries	--	5,694	--	22.8	--	14,874	--	5.7
Blueberries	--	9,991	--	39.9	--	77,150	--	29.5
Wild blueberries	--	907	--	3.6	--	45,763	--	17.5
Boysenberries	--	304	--	1.2	--	1,068	--	0.4
Cranberries	--	1,134	--	4.5	--	41,310	--	15.8
Currants	--	323	--	1.3	--	382	--	0.1
Loganberries	--	97	--	0.4	--	93	--	0.0
Raspberries	--	6,588	--	26.3	--	21,554	--	8.2
Straw berries	--	8,638	--	34.5	--	58,718	--	22.4
Other berries	--	856	--	3.4	--	828	--	0.3
Total land in berries 1/	--	25,017	--	138.0	--	261,733	--	100.0

-- = not available. 1/ Share of total farm over 100 percent because farms may grow more than one fruit, tree nut, or berry crop.
Source: USDA, National Agricultural Statistics Service, Census of Agriculture, 2002 and 2007.

Table 23--U.S. Berry Farms and Acreage, 2002 and 2007

Commodity	Harvested farms 2002	Harvested farms 2007	Percent change 2002-07	Harvested acres 2002	Harvested acres 2007	Percent change 2002-07	Share of total acres 2007
			--Percent--			--Percent--	
Blackberries 1/	3,565	4,471	25.4	10,210	10,728	5.1	5.1
Blueberries	6,428	7,516	16.9	52,002	60,353	16.1	28.8
Wild blueberries	665	728	9.5	23,851	23,492	-1.5	11.2
Boysenberries	320	270	-15.6	1,097	823	-25.0	0.4
Cranberries	1,099	1,088	-1.0	40,685	38,597	-5.1	18.4
Currants	103	276	168.0	294	253	-13.9	0.1
Loganberries	129	89	-31.0	--	77	--	0.0
Raspberries	4,521	5,719	26.5	19,888	19,363	-2.6	9.2
Strawberries	6,799	7,807	14.8	55,866	55,601	-0.5	26.5
Other berries	353	691	95.8	--	503	--	0.2
Total 2/	18,234	--	--	206,034	209,790	1.8	100.0

-- = Not available. 1/ Includes dew berries. 2/ Total harvested farms and acres in 2002 are from 2002 Census of Agriculture. Harvested acres in 2007 is the sum of individual berry crops. Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture.

Table 24--U.S. Strawberry Farms and Acreage, 2002 and 2007

Commodity	Harvested farms 2002	Harvested farms 2007	Percent change 2002-07	Share of total farms 2007	Harvested acres 2002	Harvested acres 2007	Percent change 2002-07	Share of total acres 2007
			--Percent--				--Percent--	
California	684	719	5.1	34.2	32,183	34,101	6.0	61.3
Florida	217	202	-6.9	10.8	6,595	6,538	-0.9	11.8
Oregon	328	285	-13.1	16.4	3,013	1,960	-34.9	3.5
Top 3 states	1,229	1,206	-1.9	15.4	41,791	42,599	1.9	76.6
Other States	5,570	6,601	18.5	84.6	14,075	13,002	-7.6	23.4
United States	6,799	7,807	14.8	100.0	55,866	55,601	-0.5	100.0

Source: USDA, National Agricultural Statistics Service, Census of Agriculture, 2002 and 2007.

(Reprinted from: Pollack, S. and Perez, A. 2009. Fruit and Tree Nuts Outlook. USDA Publication FTS-336, March 27, 2009. This entire report may be accessed on line at: http://www.ers.usda.gov/Publications/FTS/2009/FTS336.pdf.)

EQIP ORGANIC INITIATIVE

The USDA is setting aside $50 million of funding for a special Organic Initiative through the Environmental Quality Incentives Program (EQIP) to support and encourage organic production.

Growers have just three weeks to apply for this special funding starting Monday, May 11 and ending Friday, May 29.

The Organic Initiative will be administered by the Natural Resources Conservation Service (NRCS). Interested producers should visit their nearest USDA Service Center to determine eligibility.

Additional information on the EQIP Organic Initiative is available at: http://www.nrcs.usda.gov/programs/eqip/ .

State offices of NRCS can be found at this website: http://www.nrcs.usda.gov/about/organization/regions.html.

A useful memo about the Organic Initiative is available from the National Sustainable Agriculture Coalition at this website: http://sustainableagriculture.net/our-work/conservation-environment/organic-initiative/

Eligible Farmers:

- Farmers just beginning or in the process of transitioning to organic production
- Existing certified organic farmers who want to transition additional acres or animals
- Existing certified organic farmers who need to adopt additional conservation measures
- Producers who sell less than $5,000 in agricultural products and are thus exempt from formal certification are still eligible for Organic Initiative payments.

North American Strawberry Growers Association

2009 Summer Tour

Tuesday/Wednesday, August 11–12, 2009

The tour will be based out of the Four Points by Sheraton which is near the Chicago O'Hare Airport.

Tour highlights include innovative growers, fabulous farm markets and new growing systems, including stacking systems and the Filtrexx growing system. More details to come.

Day 1

Johnson's Farm Produce *Hobard, IN*
Krohne Plant Farms *Hartford, MI*
Southwest Michigan Research & Extension Station Benton *Harbor, MI*
More stops to be added

Day 2

Knutson Farm *Newark, IL*
Tom's Farm Market & Greenhouses (Halat's) *Huntley, IL*
Thompson Strawberry Farm *Bristol, WI*

For more information, please visit www.nasga.org, or call Kevin Schooley at 613.258.4587.

North American Strawberry Growers Association

News from the NYS Berry Growers Association

NYSBGA RECEIVES NORTHEAST AGENHANCEMENT GRANT FROM FARM CREDIT ASSOCIATIONS

Dale Ila Riggs, Chair, The Berry Patch, Stephentown NY

It's a rainy day. This column is due, and the pressure is on to decide what to write about. So what do I do? Procrastinate and walk down to the mailbox. But what perfect timing! In my mailbox is the good news that the NYSBGA received a $1500 grant from the Farm Credit Northeast AgEnhancement program in response to our recent funding request. In March, the Board of Directors decided to pursue funding to help us start a promotion and marketing program for the berry industry. The first stage of this process is to develop a new, updated, readily identifiable logo that Association members will be able to use to identify their product as a NYS grown berry. We also want the logo to represent the breadth, freshness, and quality of locally grown NYS berries.

Thanks to this grant funding from Farm Credit, we will now be able to hire a graphic designer to design such a logo. The logo will be designed to be suitable for reproduction in both color and black and white versions; suitable to use in any size, from business cards to banners; and identifiable to all ages of customers, from toddlers to the elderly, without the initials NYS attached to it. The new logo will be made available to all Association members to use in both wholesale and retail marketing venues. The intent of the Association is to tap into the growing movement for the public to support local farms by making it easy for the public to recognize locally grown berries rather than berries that have been shipped in from the far corners of the country.

Farm Credit Northeast AgEnhancement grants support programs, projects and events that are intended to strengthen agriculture, commercial fishing, and the forest products sector in the Northeast. It is a combined effort of Farm Credit of Western New York, First Pioneer Farm Credit, Yankee Farm Credit, Farm Credit of Maine and CoBank. These Farm Credit institutions serve the six New England states, New York and New Jersey. The Board is very pleased that the Farm Credit institutions that contribute to this competitive program found our project to be worthy of funding, and we thank them very much for this funding. If you have ideas of what you would like to see in a logo, feel free to share those thoughts with myself (rberriesrgreat@fairpoint.net); Paul Baker, our Executive Secretary (goodberries@roadrunner.com) or any Association Board member.

Last Call for Membership in 2009

Paul Bakers, Executive Secretary, Watertown, NY

As you evaluate the 2008 marketing and growing season I want you to consider if there were not some missed opportunities that if you had it to do all over you might have done a little differently. How can I structure 2009 to return my operation higher net returns and reduced growing problems? Am I doing enough to ensure a work force in the new crop season? If any or all of these thoughts are surfacing in your mind than you are not alone.

The New York State Berry Growers Association is perhaps one tool you could take better usage of or support in a different way. Our stated goals are to help the membership increase marketing opportunities, encourage research designed to answer the issues that are challenging you, support variety trials to give you insights into different varieties you might try on your farms and to be your advocate in government to promote legislation to support your needs. Berry operations in New York for the most part are small units of larger farm operations or a passion that is pursed by the part time grower. To stimulate change we need to collectively join to create enough inertia to voice our needs for supportive legislation or quality extension education.

In 2008 the Board of Directors stepped up the efforts to initiate changes for our industry. Marketing has always been a need for out membership so we increased our PR program to help promote the season. In 2007 we issued thee press releases that were sent to 1387 media sites across New York State. These releases ran from June 4 to July 12. In 2008 we decided that we needed to do more. From June 2 to July 25 we released seven different press releases across New York State. In 2008 we sent these press releases to 2885 different media outlets. In 2008 we more than doubled our number of press releases and increased the exposure by greater than two fold. Could we have done more? The truth is no. We need to increase our fund base in order to increase the message to your audience in an interesting and timely manor. We need your help in getting the message out to a wider customer base.

Over the last two years we have helped fund research with funds from your membership dollars to help the variety trials for berries with Courtney Cox and the herbicide studies of Dr. Robin Bellinder. Cornell needs our input and research dollars in these difficult times to accomplish the studies, we as an industry, need to remain competitive in today's market place.

Please consider joining the NYSBGA today so we can list your farm operation on our FIND A FARM site. I encourage you to click on the site and see how your peers are there for their customers to be found. This alone should more than pay for your membership. The fact remains this is your industry and you need to be involved in shaping in what direction we wish it to go.

IN MEMORIAM - JAMES W. (JIM) COULTER

James W. Coulter passed away on Friday, April 17th. Jim was a wonderful, loving husband, father, grandfather, and friend to many.

Jim was born in Lockport, NY, in 1928 and grew up with brother, Roger, at the Coulter homestead on North Ridge Road. His "schooling" started in a one room school house on North Ridge. He attended Wilson High School and graduated in 1949 from Cornell University, where he was a member of Alpha Gamma Rho fraternity. He married Shirley Nagler in 1950 and they began life together in Lockport. They had three children: David, Debra and James.

Jim worked for Chevron Chemical selling agricultural chemicals for 35 years, starting in western New York and ending with a territory across the East Coast. He and Shirley lived in Medford, NJ, for seven years, after which he retired to the family homestead in 1978 and started Coulter Farms, growing fruits and vegetables. Coulter Farms has grown steadily from its small start over the last three decades. Jim especially enjoyed working with cousin and Farm Manager Jeff Hall over the past 20 years.

Jim was active in the Emmanuel United Methodist Church, serving as head usher across several decades. He was a past president of the Niagara County Farm Bureau and received the NY Farm Bureau Distinguished Service to Agriculture Award in 2005. He also served on the Cooperative Extension Board, the Niagara County Farmland Protection Board, the Wilson Conservation Club and the Town of Cambria Zoning Board. He is a past member of the Masons and the Kiwanis Club. Jim enjoyed his family and friends, hunting and fishing, and the farm. He drew his energy from farming and the people he met along his path.

Jim played an active role in the berry industry at both the state and national levels. A member of the New York Berry Growers' Organization from its beginning, he always had an active leadership role in the organization. As board member Jim was always looking forward to address future needs of the berry industry in NY and came to meetings prepared to share good ideas on advancing the industry. He recognized the vital need that research plays in the industry and always contributed generously to the association's research fund. Jim was an excellent collaborator in berry research, supporting both monetarily and by participating in on farm research and demonstration trials. As part of his operation Jim wholesaled strawberry plants to local growers, always contributing a portion of the sales to the research fund. Jim was always very positive and encouraging about the industry and often called fellow berry farmers during the season to check how things were going. Fellow growers noted Jim to be very easy to get along with and talk with and that he will be greatly missed among them.

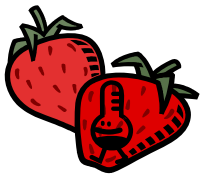
Jim was also a member of the North American Strawberry Growers' Association and hosted a western NY stop for their 2007 annual summer tour, providing a tractor and wagon rides for on–farm tours of his operation and refreshments for NASGA members.

Jim was always available to contribute to the discussion on farm topics from the size of the berry crop to migrant labor issues. He was involved in early conservation practices like no-till corn and trickle irrigation and enjoyed tinkering with each new plant variety or farm technology. He was known for maintaining a personal and genuine relationship with his suppliers, customers and competitors, extending from his chemical sales days to his farm career and his personal life.

Jim is survived by his wife, Shirley; sons David and Jim (Penny) Coulter; and daughter, Debra (Doug) Jangraw. He has five grandchildren Rebecca (Jon) Ophardt, David Jangraw, Saer Coulter, Audrey Coulter and Wyeth Coulter. He is also blessed with sisters-in-law Shirley Coulter and Carolyn Nagler, four nieces and nephews, and a large extended family and group of friends that he loved dearly.

Expression of sympathy may be sent to: Shirley Coulter, Coulter Farms, 3871 N. Ridge Road, Lockport, NY 14094.

Donations in memory of Jim may be made to the Emmanuel or North Ridge United Methodist Churches, the New York State Farm Bureau Foundation for Agricultural Education, the Western New York Land Conservancy or a charity of your choice. Or join Jim in his efforts to support the NYS berry industry and send a contribution to their research fund.



MAY BERRY BAROMETER

HELPING TO KEEP YOU UP TO THE MARK!

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

Instant replay! For the second year in a row we have a season opener where we went from the mid 50's to 90 degrees in some locations across the state in one week's time?! Again the temperatures are somewhat back to normal and the growing season well on its way from last week's warm up. Frost is the critical issue for blueberries, currants, gooseberries, and strawberries.

ALL BERRY CROPS:

1. **Frost protection –** Set up and test overhead irrigation systems. Get floating row cover ready for application. Review critical temperatures at which berries are damaged. Be sure weather equipment is functioning properly.
2. **Fertilization –** Now is the time for the first of 2 split applications on blueberries, raspberries and ribes.
3. **Weed management** – Record efficacy of any pre-emergent applications. Scout for newly emerging weeds.
4. **Pest management**
   a. Review last year's pest management notes to know what pests you may expect and when to watch for them. Set up monitoring systems as needed: sticky cards, traps, etc.
   b. Scout! Record pest frequency and locations.
   c. If you see problems developing, check out the berry diagnostic key for help in identifying the culprits: http://www.hort.cornell.edu/department/faculty/pritts/BerryDoc/Berrydoc.htm.
   d. See Cornell 2009 Pest Management Guidelines for Berry Crops for management options for various pests.
5. **Irrigation** – We are currently running 1-2 inches below average for rainfall across the state. If rains continue to skirt your area you will need irrigation set up and ready to go as soon as next week. Most berry crops need 1-2" of water per week. Note dates and amounts of water applied. Be sure to record local rainfall amounts and dates as well.

STRAWBERRIES:

Established plantings:

1. **Frost protection** – We are at risk now through the end of the month for frost.
2. **Weed management** – Poast or Select for perennial grasses; Stinger for dandelions and thistles; Prowl H20 for banded applications between rows. Hooded or shielded applications of Gramoxone Inteon or Chateau to row middles; do not apply after fruit set. Follow any special instructions when making applications (gal/acre, psi, shielded application only, etc.). Remember to include any adjuvant(s) listed on the label.
3. **Disease management**
   a. *Leaf spot diseases* – There were reports of serious leaf spot outbreaks in new plantings last season. An early season application is recommend when carry-over inoculum from the previous year is high and conditions are favorable for disease development.
   b. *Gray mold* (Botrytis) - Protection of blossoms is critical in gray mold management. Excellent gray mold protection may be obtained with 2 fungicide sprays eat early bloom (10-20%) and 10 days later. Continued fruit protection may be needed during prolonged periods of wet, foggy, or humid weather prior to harvest.
   c. *Anthracnose* – This disease may occur on both green and ripe fruit, but is most common on ripe fruit following periods of warm, wet weather. Monitor fields for the presence of anthracnose, particularly if favorable weather conditions exit. **Note**: Fungicides will not stop an infection once it has begun. If fields with a previous history of the disease a protective fungicide schedule is recommended. See article that follows by Barbara Smith and Thad Cochran for cultural control options for anthracnose.
4. **Arthropod pest management** (insects and mites)
   a. Bud weevil (clipper) – Adults puncture blossom buds while feeding and deposit eggs in the nearly mature buds. Buds are then girdled so they hang by a mere thread or fall to the ground. Injury is most likely along field edges or when fields border woodlots or other suitable sites for adult overwintering. Suggestion action threshold is more than one primary or secondary flower bud or more than 2 tertiary flower buds clipped per truss, or more than one injured truss per foot or row. *(adult, top right below).*

b. *Tarnished plant bug* - Scout for these any time from just before blossoms open to harvest. Strike flower clusters over a white paper plate. Suggested action threshold is 0.5 nymphs per cluster or 4 out of 15 clusters with 1 or more nymphs. *(nymph, center right)*

c. *Spittle bug* - This insect also appears around bloom, leaving frothy white masses on stems and leaves. These masses harbor nymphs which pierce stems and suck plant juices. Extensive feeding may lead to plant stunting and reduced berry size. Damaged leaves appear crinkled and darker green than healthy leaves. Spittle masses are a great nuisance to pickers. Suggestion action threshold is one spittle mass per sq. ft. of row.*(spittle mass, lower right)*

New plantings:

1. **Plant establishment**
   a. Runners need good soil contact to root. Keep the 18" planting strip weed free by hand weeding or using cultivation equipment for good runner establishment. Direct runner plants from aisles back into planting row area. Remove blossoms as they open to encourage good plant establishment and growth.
   b. Remove flower clusters and blooms as they emerge to promote good plant establishment.
2. **Disease management**
   a. Monitor new plantings for leaf spot, especially if overhead irrigation is in use. If disease is detected protectant sprays should be considered if conditions are favorable for subsequent disease development.

BLUEBERRIES:

Established plantings:

1. **Frost protection** –We are at risk now through the end of the month for frost.
2. **Weed management** –Gramoxone Inteon or Scythe before new cane emergence. Follow any special instructions when making applications (gal/acre, psi, shielded application only, etc.). Remember to include any adjuvant(s) listed on the label. Hand-weed in row, mow row middles and borders.
3. **Disease management**
   a. *Mummyberry* – Plantings with a history of this disease should already be implementing a protective spray program for blossoms. Plantings without previous history of disease should be monitored for signs of primary infection (shoot blight phase). Infected leaves and shoots wilt, turn violet brown, and die. Grayish masses of spores may be evident along midribs of blighted leaves. If shoot blight is detected in your planting, protection of blossoms is essential. *(top right)*
   b. *Botrytis blossom and twig blight* – This disease is typically not a serious problem in NY State. Last season, however, serious outbreaks occurred in the southwestern part of the state. If you have a history of this disease you may want to consider protectant sprays when rainy, foggy weather prevails during prebloom and bloom. *(above, lower right)*
   c. *Anthracnose fruit rot and blossom blight* – Disease development is favored by warm, wet weather. Infections may occur anytime during and after bloom but may not be apparent until fruit ripens. Bloom time sprays for other diseases, such as mummyberry, should also manage anthracnose.

4. **Arthropod pest management** (insects and mites)
   a. *Cranberry and cherry fruitworms* – Numerous reports of problems with these pests were received last season. Adult moths appear during late May to early June. Use pheromone traps to monitor adult flight activity and aid in timing of applications. For more information on fruitworms see: http://www.fruit.cornell.edu/Berries/bbpdf/bbfruitworm.pdf.

New plantings:

1. **Plant establishment**
   a. Gently rub off emerging flower buds between the palms of the hands to promote good plant growth and establishment.
2. **Weed management**
   a. Devrinol may be applied for weed management before seedling weeds emerge. Till or water in within 24 hours. Hand weeding and mulch within row for weed management.

RASPBERRIES AND BLACKBERRIES:

Established plantings:

1. **Weed management** –Aim, Gramoxone Inteon or Scythe before new cane emergence. Can suppress primocanes. Hand-weed in row, mow row middles and borders.
2. **Arthropod pest management** (insects and mites)
    a. *Raspberry fruit worm* – Watch for raspberry fruit worm adults (small light brown beetles) in early May when they begin feeding on young leaves and buds. Adults skeletonize leaves and hinder fruit development. Small larvae feed inside flower buds and then bore into young fruit, causing them to dry up or decay and fall off. These pests are especially a problem in weedy fields. Protectant applications should be made as soon as damage is detected in early spring (just before blossoms open).
    b. *Raspberry sawfly* –Sawfly larvae are ¼" pale green worms that feed on the outer edges of leaves, chewing out irregular holes and sometimes skeletonizing leaves. These insects are also active in early May; products are often effective against both insects; see labels for details.

New plantings:

1. **Weed management** – Apply Devrinol after planting before seedling weeds emerge. Till or water in within 24 hours. Follow any special instructions when making applications (gal/acre, psi, shielded application only, etc.). Remember to include any adjuvant(s) listed on the label. Use mulch in-row for 1st year on lighter soils. . Hand weed in-row on heavier soils.

CURRANTS AND GOOSEBERRIES:

Established plantings:

1. **Pollination** – Wild bees and other insects are efficient pollinators but cannot always be depended upon due to fluctuating population numbers. Where bee activity is less than desired, honeybees can be moved in quickly and in large numbers. Hives should be set at about 25% bloom at a density of 1-2 hives per acre. Locate hives in the centers of fields. Mow weed and ground cover flowers before introducing bees.
2. **Weed management** – Gramoxone Inteon or Scythe before new cane emergence.
3. **Arthropod pest management** (insects and mites)
    a. *Currant aphid* – This aphid is most commonly seen on red and white currant, and sometimes gooseberry. Infested leaves are cupped, galled, distorted and discolored. Honeydew secreted by aphids covers foliage and fruit with a sticky coating.
    b. *Gooseberry fruit worm* – adults lay eggs in flowers of gooseberries, currants and Jostaberries. Larvae burrow into berries, weaving portions of stems together with silken webbing.
    c. *Imported currant worm* – Worms of this pest feed first in colonies then singly, voraciously stripping plants of foliage. Up to 3 generations a season may occur if weather conditions are favorable. Sprays should be applied as soon as worms appear. Although these larvae resemble other lepidopteran worms they are not related and **cannot** be controlled with BT.

New plantings:

1. **Weed management** - Hand-weeding or spot applications to control weeds.

STRAWBERRY ANTHRACNOSE: CULTURAL CONTROL OPTIONS

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Anthracnose generally refers to diseases of many fruit and vegetable crops worldwide caused by fungi belonging to species of *Colletotrichum*. Anthracnose diseases of strawberry are caused by three species, *C. fragariae*, *C. acutatum*, and *C. gloeosporioides*. All produce similar symptoms and may infect the fruit, crowns, flowers, petioles, runners, leaves, and roots of the strawberry plant. Anthracnose fruit rot, caused by *C. acutatum*, is an important disease that affects strawberry production worldwide, and anthracnose crown rot, caused by *C. fragariae* and *C. gloeosporioides*, is destructive in strawberry nurseries and fruit production fields particularly in the southeastern U.S. Increased losses due to anthracnose fruit and crown rots in the U.S. since the 1980s may be related to the shift from matted row culture to the annual plasticulture production system, as well as a change in cultivars. While fungicides are generally used to control anthracnose, cultural practices may be modified to reduce the incidence and severity of anthracnose in nurseries and production fields.

Anthracnose Pathogens
The greatest economic losses due to anthracnose on strawberry are from fruit rot caused by *C. acutatum*. This fungus also infects many other fruit and vegetable crops, including apples, tomatoes, peppers, peaches, blueberries, blackberries, and grapes. The presence of the pathogen has been reported on strawberries in almost all areas of the world where they are grown. Crown infections of strawberry plants by *C. acutatum* often result in stunted plants rather than plant death; however, infected plants usually do not thrive after transplantation and produce few berries at harvest.

Colletotrichum fragariae was assumed to be the causal agent of strawberry anthracnose in the U.S. until 1986 when the presence of *C. acutatum* on strawberry was reported in the U.S. In the late 1970s, *C. gloeosporioides* was identified as the causal agent on plants obtained from Arkansas and North Carolina nurseries that died from a crown rot identical to that caused by *C. fragariae.* It has a wide host and geographic range and causes anthracnose crown rot, petiole lesions, and leaf spots indistinguishable from those caused by *C. fragariae*.

Anthracnose Disease Symptoms
Fruit and flower: All three *Colletotrichum* spp. may cause anthracnose flower blights and fruit rots. Lesions on ripe fruit begin as whitish, water soaked lesions up to 3 mm in diameter, later turning a light tan to dark brown and eventually becoming sunken and black. Under high humidity, the lesions will be covered with pink to orange to light salmon-colored spore masses in 2 or 3 days. Infected fruit eventually dry down to form hard, black, shriveled mummies. On green fruit, anthracnose lesions are small (1/16 to 1/8 inch across) hard, sunken, dark brown or black, and infected seeds (achenes) on these fruit turn black and are slightly sunken. Infected green fruit mummify rather than ripen. Fruit can be infected at any stage of development, but green fruit are much more resistant to infection than fully ripe, pink or white fruit.

Fully open flowers are more susceptible to infection than closed buds. Infected flowers dry quickly, and dark lesions spread down the pedicel from the flower; or the pedicel may be infected first, then it is girdled and the bud dies. Sepal infections occur as the bud is emerging from the crown. Sepals dry and turn brown; the resulting tip burn resembles that caused by excessive fertilizer. When warm, humid conditions prevail during bloom, all parts of the flower truss may die and remain attached to the plant giving them a blighted appearance. Small black spots on young button-sized fruit may also develop from flower infections.

Petioles and Stolons: Each of the three *Colletotrichum* spp. causes petiole and stolon lesions which are dark brown or black and sunken and often girdle the petiole or stolon. Pink masses of spores are usually visible near the center of each lesion. When petioles or runners become girdled, individual leaves or entire daughter plants may wilt and die. Petiole infections occur at the base of the petiole, causing the leaf to bend sharply at the point of attachment and hang down.

Leaves: Black leaf spot, typically caused by *C. fragariae* and *C. gloeosporioides*, is characterized by grey or light black spots that usually are not necrotic and are peppered across the top surface of the strawberry leaflets. While the fungi do not sporulate in these leaf lesions, the presence of leaf spots may be a warning signal that abundant inoculum is present on other plant parts and anthracnose control measures should be implemented. Irregular leaf spot, caused by *C. acutatum*, has dark brown to black lesions forming on leaf margins and tips and extending along the margin and inward to the mid-rib. These lesions do not continue to develop in fully expanded leaves but infected leaves may persist on plants for several months. The fungus sporulates in these lesions and may serve as an inoculum source for flower blight and fruit rot.

Crowns: Anthracnose crown rot, caused by either *C. fragariae* or *C. gloeosporioides*, is first apparent by the wilting of the youngest leaves in the hottest part of the day. The young wilted leaves may appear to recover and become turgid in the evenings; however, most plants will wilt and die after a few days. Shortly after a plant wilts, a red discoloration appears within the crown tissue, after the plant has been dead for several days, the crown tissue turns dark brown to black. The fungus moves into the crown from petiole or stolon cankers, or an infection may start from spores washed by rain or irrigation into the center bud. *C. acutatum* also may cause crown death; however, typically a single side crown is infected rather than the entire crown, and infected plants are stunted but do not die. *C. acutatum* also causes root lesions.

Anthracnose Infection Process and Pathogen Dispersal
Infected transplants and soil from infected transplants are the primary source of inoculum in most fields, especially in annual production systems. This is especially true for *C. fragariae*, which has a limited host range and does not survive in soil over the summer. In perennial systems, the fungi may remain in infected plants and debris, providing inoculum for the following fruiting season. Spores are dispersed in the field by wind-driven rain, splashing water, insects, or by the movement of workers, equipment or animals. Disease development and spread is minimal under cool, dry conditions. Crown infections often occur in the nursery but do not appear until after transplanting into production fields where the

fungus continues to develop. Infected plants may suddenly die during warm weather in the fall or early spring of the following year.

Anthracnose is a warm-weather disease with an optimum temperature for plant infection by *C. fragariae* between 80 and 90 °F. The disease is generally not a problem in cooler production areas unless warmer temperatures and rainfall prevail during fruit set and harvest. The optimum temperature for *C. acutatum* fruit infections is 68 °F. Both fungi need nearly 100% relative humidity for spore germination and infection to occur. Under rainy, warm conditions anthracnose spreads very quickly and may destroy the entire crop. The time from infection of the strawberry by *Colletotrichum* spp. to first sporulation is an important factor in the speed at which anthracnose may spread within a field and depends on the temperature and ranges from 2 to 3 days at 25 oC to 6 to 17 days at 5 oC. Spores produced by *C. acutatum* on symptomless foliage may be a significant source of inoculum for fruit infections and may also contribute to the availability of inoculum throughout the growing season. *Colletotrichum* spores may survive up to eight weeks on leaves and up to five weeks on fabric. The formation of spores on leaves increases when exposed to flower extracts compared to when exposed to leaf extracts or water suggesting that *C. acutatum* inoculum levels on strawberry foliage may increase during flowering.

Rain splash is the primary means by which *Colletotrichum* spp. spores are spread from plant to plant in the field. Most fruit infection occurs in a 10 inch (25 cm) radius of the source of the inoculum, which is often another infected fruit. *C. acutatum* spores may survive in soil and plant debris under dry conditions for up to 12 months, but die rapidly under moist conditions, i.e. when soil moisture is greater than 12%. When strawberries are planted in infested soil, they may become infected when soil containing spores is splashed onto crowns or stems by rain or irrigation water. In fields that have been fumigated, the disease usually originates on infected nursery stock or from strawberry plants in adjacent fields or from weeds that are known to be hosts of the pathogen. In addition, inoculum can come from contaminated soil on field equipment or be blown in from nearby weeds and other plants around production fields that were colonized by inoculum from a previous diseased strawberry crop. While many other fruit and vegetable crops are known to be hosts of *C. acutatum*, molecular analysis of *C. acutatum* revealed that the population on strawberry reproduces asexually and has limited diversity.

Anthracnose Cultural Control Measures

1. **Use clean transplants.** Since disease-free transplants are the primary control of anthracnose crown rot and fruit rot, always purchase disease-free transplants from a reputable nursery. To lessen their risk of purchasing anthracnose infected plants, strawberry growers in the southeastern U.S. were advised to obtain their transplants from nurseries in the northern U.S., Canada, or California that were believed to be outside the range of *C. fragariae*. However, *C. acutatum* does occur in these areas so purchasing plants from nurseries in these areas does not guarantee that they will be free of anthracnose. Anthracnose-free transplants can be produced in regions where the disease is present by locating nurseries away from areas where strawberries are grown commercially and limiting the movement of personnel and equipment from production fields into nursery fields.

2. Inspect Fields Regularly. During the growing season, watch for anthracnose symptoms. If infected plants are found promptly remove and destroy (bury or burn) them and all plants within about a 10 foot radius. Pay close attention to developing fruit during times of high moisture levels particularly following rains or sprinkler irrigations. If fruit rot appears in a small area of the field or before the plant canopy is well developed, foliar fungicides may be necessary to prevent further spread of the disease and reduce crown infections.

3. **Reduce Inoculum Spread.** Anthracnose spreads within a field by splashing water and is especially severe in fields mulched with plastic. Straw, as well as, and living mulches (such as wheat, rye, or rye grass) in row middles will reduce splash and disease spread within a field. Sublethal doses of grass specific herbicides such as Poast® may be used to prevent excessive growth of rye grass. Anthracnose is less severe when water is supplied to plants using drip irrigation rather than overhead irrigation.

4. **Remove Inoculum from Field (Sanitation).** The best control of anthracnose is to keep the pathogen out of the strawberry fields. New fields planted with healthy transplants can be established and kept disease-free if they are located some distance away from diseased fields. To reduce the buildup of anthracnose fruit rot in the field, harvest fruit frequently and remove all rotten fruit from the field. To reduce the spread of inoculum, do not work in the field during wet conditions. Infected areas of a field should be harvested last in the day or workers should wash up and change to clean clothes when they must enter uninfected areas of the field after they have harvested areas where fruit rot is present. Clean field equipment before using it to ensure that contaminated soil and plant parts are not transported into a field or from an infested part of the field to a non-infested section.

If transplants are suspected to be contaminated with the fungus, thoroughly wash all soil from them before planting to remove most of the inoculum. Plants that have been in long-term cold storage (28°F) may be treated with hot water before transplanting by dipping trays of the transplants into a hot water bath for 7 minutes before planting to kill the

fungus. Thoroughly wash these plants before treatment to remove all dirt; then place them in a circulating water bath held at a constant temperature of 120°F. Immediately after the hot water treatment, immerse the transplants into cold water and plant them as soon as possible. This hot water treatment is not recommended for fresh-dug transplants that have only been stored at 33°F.

Soil Solarization: Solarization has been shown to be effective for the control of soil-borne pathogens and weeds in areas where high soil temperatures can be obtained. Solarization is carried out after the beds are formed and can be effective if weather conditions are ideal, i.e., 30-45 days of hot weather that promotes soil temperatures of at least 122°F down to about 14 inches.

5. **Use Nitrate Fertilizer.** The use of calcium nitrate rather than an ammonium form of nitrogen will reduce the severity of both anthracnose crown rot and fruit rot in production fields. In a greenhouse study strawberries grown in soils with high levels of nitrogen, especially from ammonium sources, were more susceptible to anthracnose than plants grown in soils with lower nitrogen levels or those with higher levels of nitrogen supplied as calcium nitrate.

6. **Manage Weeds in and around the Field.** Crop rotation with a non-host crop will reduce levels of the pathogen in the soil. Good weed management in and around the field will destroy weeds that may harbor the pathogen. It is important to remove the weeds from the fields after they are destroyed because the pathogen can still produce spores even though the weeds are dead. Surrounding production or nursery fields with a tall, non-host crop, such as sorghum, will reduce spore movement into the field from adjacent contaminated fields.

7. **Plant Anthracnose Resistant Cultivars.** Breeding for genetic resistance to anthracnose and the development of resistant cultivars is a primary means of reducing economic losses due to this disease. This is environmentally sound because it results in reduced use of fungicides. In Florida, planting resistant cultivars such as Carmine and Sweet Charlie has consistently controlled anthracnose; however, when moderately susceptible cultivars (e.g., Strawberry Festival) or highly susceptible cultivars (e.g., Camarosa and Treasure) are grown, regular applications of fungicides are usually needed to suppress anthracnose.

8. **Use Fungicides.** In areas where anthracnose pressure is very high, such as in the southeastern U.S, cultural practices may not provide adequate disease control, and protective fungicide treatments applied from bloom through harvest may be necessary to achieve an acceptable level of disease control. Fungicide dips can be used on transplants before planting in production fields, and foliar fungicides are available for use on plants when the disease is present and conditions are ideal for foliar and fruit disease development. Strobilurin fungicides such as Abound® or Cabrio® may be tank mixed with a protectant fungicide. Captevate®, Pristine®, and Switch® are useful during bloom because each fungicide contains two active ingredients; one for anthracnose control and another for botrytis control.

Organically Acceptable Methods: Most of the cultural controls discussed in this paper, including organic mulches, soil solarization, washing soil from crowns before planting, hot water treatment and crop rotation, are acceptable for use in an organically grown crop. Since inoculum tends to readily build up in multi-year plantings, the use of annual planting will reduce the severity of anthracnose.

Conclusions

Our knowledge of the anthracnose pathogens and the epidemiology of anthracnose diseases has increased and thereby has improved our ability to control these diseases. Changes in cultural practices have resulted in reduced levels of disease. At the same time, development of more effective fungicides and their registration for use on strawberries have greatly reduced losses due to both anthracnose crown rot and fruit rot. Anthracnose resistant cultivars have further reduced economic losses due to these diseases. Even so, growers may sustain severe losses when environmental factors are highly favorable for anthracnose development.

Acknowledgements: *Mention of trade names or commercial products in this article is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the U.S. Department of Agriculture.*

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MARKETING IN TOUGH TIMES

Steve Bogash, Penn State Cooperative Extension

Anyone facing the sales climate going into this spring and summer that is not at the very least apprehensive could reliably be considered crazy. For many of us the last real downturn that we experienced was the Dotcom bubble pop of the 90's and that is nothing compared to today's economic climate.

With so many of our customers out of work, worried about being out of work soon, or having had their financial nest egg greatly shrunken, selling things this growing season will be very different. There are some things that you can do to help your bottom line. Doing something is far preferable to hiding under your office desk and praying.

- Be sure your advertising is targeted, but keep advertising even when things are tight. First and foremost, you need your customers to know that you are alive and kicking. Secondly, numerous studies (they may have been done by advertising related businesses, but I have not had the time to do that deep research) show that businesses that keep advertising and do so in an organized manner following a coordinated plan do much better in both the short and long run. Rather than run scattered ads in newspapers with discounts and the usual stuff you run every year, try a new approach; take control of where your ads are located. If you are selling greenhouse ornamentals, make sure that your ads run with associated news articles or in garden inserts. For produce, require that your ads be connected with food articles. Wasting money on teaser ads may work in fat times, but now is the time to take control. Develop a budget, stick to that budget and keep records of how your new campaign works to better refine it later. I've always liked coupons that must be presented to measure how an ad works.

- Be sure your place looks maintained. This is not the time to let your signs fade, shingles fall off and your parking lot stripes vanish. If your customers question whether you are in business to stay, they will migrate elsewhere. Few people like doing business with failing companies unless they are giving things away.

- Submit articles to local newspapers, church newsletters, garden clubs....If there was ever a time to clearly demonstrate your expertise and how wonderful your business is, this is the time. If you've got meeting room space, invite local garden clubs to use the space for meetings, give them tours, maybe provide part of their refreshments, use your imagination.

- Sample (how would that work with plants?): While staying within NY Dept. of Agriculture rules and regulations, provide samples of ready to eat (RTE) produce. This can be soup, salsa, dips or simply cut produce. People buy more readily when they know what they are getting. Be sure to provide recipes for whatever RTE products you offer along with the main ingredients. If you've got a chef connection, take advantage of that and provide some well marketed edutainment. People love to watch others cook.

- Network, network, network.....Talk to your colleagues and competitors, you never know when mutual connections can be developed.

- Use your customer base to drag in new people, reward them for referrals: Word of mouth is still the most effective form of marketing. It costs you little and your good customers often bring in people a lot like themselves. Develop a simple straightforward method to reward people for dragging their friends in. Ask them to introduce their friend to the manager on duty for a gift. Keep the gift simple, but reasonably valuable.

- Train your staff - be sure they know your products inside out. While we are on the subject of staff, weak staff will stay that way, fear of job loss is seldom the motivator to change a lifetime of bad habits. When you hear business consultants say cut the fat, this is the first and easiest fat to go. I hate bad employees. They tend to bring even the most positive, professional people down like a bad case of the flu.

- Go after your present customer base, don't let them get away. Make sure that everything about how you do business makes it clear that you like what you do, appreciate your customers and intend to keep things that way regardless of the rockiness of our present road. Start with your warrantee, if they bring back a plant, replace it, if they say the sweet corn they got last week was wormy or mealy or off-flavor - give them a dozen. These things cost little in the larger scheme of things, but make it clear that you appreciate their business. Everyone should greet your customers - help your shy staffers with scripted lines until they get a clue. Even the shyest staffer can say "Welcome to Bogash Farms, our strawberries are awesome today." Or "We just brought in a new load of begonias, they're in the front of greenhouse #2, you've got to check them out." Everybody smiles for the customers, I know some surgeons that can help. If you have employees that cannot put down their cell phone or IPod, recommend a new line of work.

- Negotiate, yes, bargain with advertisers. These are tough economic times. Don't be afraid to ask for a price break. This is more than just saying I want a discount, bargaining takes time and patience and the willingness to say "NO" until you get the deal you want.

- Weekend weather will still be the single greatest factor. While somewhat self-explanatory, we all know that cool, wet, weekends dampen green product sales. Make your place as weather neutral as possible, so customers know that they will not suffer unnecessarily. Have umbrellas handy, help people load their cars, provide liners for under pots and flats and build overhead coverings to keep people out of the weather.

- Luxury items will probably be in low demand. Fortunately, most of you reading this article don't sell much in the way of true luxury goods. Perhaps some buyers will look at the price of raspberries and blackberries and reconsider, but most of what we sell at worst falls under the category of little luxuries and thus may be spared. I've seen color bowls getting pretty pricey in recent years.

- Things could get really tight before they get better. Your individual situation could be very different from even 10 miles away if a factory or trucker or warehouse closes that makes up a lot of your drive-past business. Keep on top of the news and keep your inventory under control.

- Price point will matter a lot. People react to price point. That is why Wal-Mart spends so much time playing with and advertising their supposedly 'falling' prices. Try to keep as much of your product priced according to perceived value. Ask friends that shop to keep an eye over your shoulder. Everyone appreciates a deal, but finding the right price is an art form. Product that appears too cheap makes one wonder what's wrong with it. Overpriced stuff simply means product that sits. This entire article should be devoted to this issue alone, but even that would help little as each business must find price points that keep sales rolling while making a profit.

- Vegetables gardening will help, but only a little unless things get really bad. I keep reading that vegetable gardening is a growing trend and that may be so, but I cannot imagine enough people tearing themselves away from their big screen television and air conditioning to make much of a difference in our businesses, yet. Make sure you have good quality vegetable plants on hand in varieties that people want. This is a minor investment and who knows what will happen as electricity prices climb and jobs vanish, maybe everyone will be growing veggies again. I'm betting hard on the big screen.

- Make your place a destination. Let's face it, people can buy produce at large grocers and do without flowers in a pinch. We are solidly in the entertainment business, so make your place worthy of your customer's time. Demonstration gardens, cooking classes, How-to classes, snack bars, things for kids to do.....all help to create an inexpensive opportunity for people to get their plants, produce, or baked goods and keep you in business.

- Don't get despondent. Gardening is still a relatively cheap hobby and people need to eat and want locally grown products. You can make it through, but not using a business model from 2007, 1997 or before that relied on lots of money floating about. Based on my reading of the economic news, that money never really existed. Those of us that can become lean and mean will still be standing next year and beyond.

(Reprinted with permission from: The Vegetable & Small Fruit Gazette, February 2009, Volume 13, No. 2)

WEATHER NOTES

NEW YORK CROP WEATHER SERVICE NOTES

Week ending April 26th: This is the first edition of the New York "Weather and Crops" for the 2009 season. The New York Agricultural Statistics Service looks forward to working with the Agricultural Weather Information Service, National Weather Service personnel, Agricultural Extension agents, USDA Farm Service Agency agents, and independent volunteer observers who collectively make this report possible. Cool and dry conditions began last Monday April 20th as high pressure from central Canada was in control. A storm system brought rainfall to most of the region Monday night into Tuesday. In its wake, much cooler weather and even some snow to portions of the area for the mid week period. Thereafter, a strong southerly flow of very mild air arrived for the later half of the week and into the weekend with well above normal temperatures.

Week ending May 3rd: An April "heat wave" started the week mainly to the south of Albany with temperatures reaching and in some cases eclipsing the 90 degree mark. Hot weather spread back north again Monday and especially Tuesday when temperatures reached 90 as far north as Albany. A cold front brought back reality to more normal April temperatures along with some showers late Tuesday into very early Wednesday. The most significant rainfall fell across the Adirondacks where more than a quarter inch fell in some spots. Much lighter amounts fell elsewhere. Another round of rain fell with a warm frontal/cold frontal passage late Thursday through Friday. Up to half an inch of rain fell south of the greater Capital District and a quarter to half an inch to the north and west. This left very little rain to fall in the greater Capital District itself, which only received a tenth to at most a quarter of an inch the entire week, thus increasing the rainfall deficit this year to nearly 5 inches by week's end.

Questions or Comments about the New York Berry News?

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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, April 26th, 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	89	32	54	6	42	61	40	0.53	-0.17	1.40	-1.19
Glens Falls	89	26	52	5	33	38	26	0.44	-0.26	1.51	-1.04
Poughkeepsie	90	30	53	4	36	66	34	0.77	-0.08	1.89	-1.08
Mohawk Valley											
Utica	81	29	47	4	17	17	8	1.05	0.00	3.09	-0.94
Champlain Valley											
Plattsburgh	88	24	50	4	28	37	23	0.63	-0.07	1.64	-0.78
St. Lawrence Valley											
Canton	82	32	49	4	22	27	17	0.91	0.21	2.49	0.04
Massena	83	35	52	6	30	39	27	0.56	-0.07	1.96	-0.34
Great Lakes											
Buffalo	80	35	52	4	38	48	28	1.17	0.47	2.77	0.30
Colden	83	30	49	4	29	34	24	0.61	-0.27	1.98	-1.31
Niagara Falls	82	36	52	4	40	56	32	1.16	0.42	3.47	0.72
Rochester	83	34	53	5	41	61	36	0.56	-0.07	1.91	-0.34
Watertown	79	34	52	6	34	38	26	1.09	0.46	3.91	1.75
Central Lakes											
Dansville	89	30	51	4	36	50	28	0.15	-0.55	0.54	-1.90
Geneva	87	31	51	4	33	43	25	0.24	-0.46	1.34	-1.17
Honeoye	87	31	50	4	32	49	30	0.43	-0.27	1.72	-0.83
Ithaca	87	28	50	4	27	36	22	0.45	-0.25	1.95	-0.56
Penn Yan	88	32	53	6	44	69	51	0.11	-0.59	1.03	-1.48
Syracuse	88	32	54	7	49	67	44	0.42	-0.35	2.15	-0.74
Warsaw	82	30	47	3	25	27	20	0.55	-0.26	2.16	-0.77
Western Plateau											
Alfred	85	25	48	4	21	24	18	0.33	-0.33	1.12	-1.29
Elmira	89	24	51	4	35	58	42	0.37	-0.26	1.56	-0.74
Franklinville	84	27	47	5	23	28	23	0.50	-0.28	1.97	-0.87
Sinclairville	85	30	49	5	27	30	21	0.56	-0.35	2.15	-1.16
Eastern Plateau											
Binghamton	85	33	52	5	39	59	45	0.56	-0.21	1.76	-0.93
Cobleskill	87	33	51	5	31	35	23	0.30	-0.47	1.04	-1.81
Morrisville	84	24	48	3	23	26	17	0.92	0.15	2.95	0.30
Norwich	88	27	51	5	32	44	32	1.11	0.29	2.70	-0.19
Oneonta	87	30	50	6	26	33	24	0.87	0.03	2.02	-0.94
Coastal											
Bridgehampton	69	39	52	4	19	36	23	1.86	0.95	4.91	1.46
New York	88	44	56	3	45	100	36	2.03	1.12	4.69	1.42

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, May 3rd, 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	90	38	61	10	79	140	94	0.12	0.58	1.52	-1.77
Glens Falls	89	30	58	9	61	99	69	0.26	-0.50	1.77	-1.54
Poughkeepsie	91	40	63	10	90	156	93	0.24	-0.69	2.13	-1.77
Mohawk Valley											
Utica	86	31	55	9	40	57	35	1.04	0.00	4.13	-0.94
Champlain Valley											
Plattsburgh	93	28	55	6	49	86	54	0.52	-0.13	2.16	-0.91
St. Lawrence Valley											
Canton	87	30	54	6	35	59	33	1.34	0.64	3.80	0.65
Massena	88	32	55	7	43	82	52	0.90	0.31	2.86	-0.03
Great Lakes											
Buffalo	80	39	57	7	53	101	57	0.54	-0.15	3.31	0.15
Colden	82	34	57	9	50	84	57	0.86	0.02	2.84	-1.29
Niagara Falls	83	38	57	6	51	107	58	0.89	0.19	4.36	0.91
Rochester	85	37	56	5	47	108	56	0.34	-0.29	2.25	-0.63
Watertown	85	31	54	7	35	73	44	0.89	0.28	4.80	2.03
Central Lakes											
Dansville	91	37	60	10	73	123	77	0.62	-0.02	1.16	-1.92
Geneva	88	37	58	8	55	98	57	0.43	-0.27	1.77	-1.44
Honeoye	89	32	58	8	58	107	65	0.82	0.15	2.54	-0.68
Ithaca	91	35	59	11	67	103	71	0.57	-0.13	2.52	-0.69
Penn Yan	93	36	60	10	72	141	100	0.43	-0.27	1.46	-1.75
Syracuse	91	37	60	9	71	138	88	0.47	-0.30	2.62	-1.04
Warsaw											
Western Plateau											
Alfred	88	32	57	10	51	75	56	0.91	0.28	2.03	-1.01
Elmira	92	34	59	10	67	125	88	0.52	-0.14	2.08	-0.88
Franklinville	86	34	56	11	46	74	59	0.74	-0.03	2.71	-0.90
Sinclairville	85	39	59	12	62	92	69	0.82	-0.07	2.97	-1.23
Eastern Plateau											
Binghamton	89	37	61	11	77	136	103	0.60	-0.17	2.36	-1.10
Cobleskill	89	33	57	9	52	87	58	0.30	-0.47	1.34	-2.28
Morrisville	87	35	57	9	54	80	55	0.71	-0.06	3.66	0.24
Norwich	92	34	56	8	53	93	63	1.01	0.20	3.71	0.01
Oneonta	89	36	58	11	59	92	67	0.51	-0.40	2.53	-1.34
Coastal											
Bridgehampton	86	36	58	8	59	95	64	0.61	-0.30	5.52	1.16
New York	91	50	65	10	109	209	101	0.58	-0.33	5.27	1.09

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