New York Berry News

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What's Inside

Help is on the way for New York farmers affected by severe weather problems experienced in our region this year. Governor Pataki has requested federal disaster assistance from the US Department of Agriculture for farmers in 42 counties that have been identified as problem areas. See the NY Ag and Markets article on page 2 of this issue for more information. There is also a synopsis of small fruit production information from the 2003 NY agricultural survey for you to consider as you make future plans for your operation.

In addition, this month's issue of NYBN features more food for thought as we approach the 2005 growing season. If you are considering becoming a berry farmer for the first time or adding new crops to your operation, work through the decision-making checklist provided by Lori Bushway. We are also spotlighting new crops for consideration, beginning with this month's article on beach plum, by Richard Uva and Thomas Whitlow. Thinking about buying a new small fruit sprayer? Check out the article by Andrew Landers on sprayer selection. Other features include the second of a series of articles on Food Safety and Produce by Betsy Bihn, Part III of a series on on-line visual image galleries of small fruit diseases and disorders and an article on building a small fruit reference library by Cathy Heidenreich, and finally, the second in a series of articles by Bob Weybright on value-added marketing.

Upcoming Meetings

October 26-27, 2004. *66th Annual Meeting of the New England, New York, Canadian Fruit Pest Management Workshop*, in Burlington, VT. **Deadline** for registration is **September 14th, 2004.** Contact Lorraine Berkett at lorraine.berkett@uvm.edu or Anne Marie Resnik, aresnik@uvm.edu or 802-656-0463.

November 3-4, 2004. *New York Grower Show*, at the New York State Fairgrounds, Syracuse, New York. For more information see article below.

November 3-4, 2004. *Fields of GREEN: Building agritourism so they will come*, in Great Bend, Kansas. For more information contact Janna Dunbar, 785-296-8132 or jdunbar@kansascommerce.com .

December 7-9, 2004. *Great Lakes Fruit, Vegetable and Farm Market Expo*, in DeVos Place, Grand Rapids, Michigan. **Go to:** http://www.glexpo.com for details.

December 15-16, 2004. *New England Vegetable and Berry Conference& New England Fruit Meetings and Trade Show*, in Manchester, New Hampshire. **Go to:** http://www.nevbc.org for details.

January 17-19, 2005. *New York State Farmers' Direct Marketing Association Conference***,** Wyndham Hotel, Syracuse, New York. Sponsored by NYSFDMA, Farmers' Market Federation of New York, New York Small Scale Food Processors Association, and Cornell Cooperative Extension. **For information**, call the NYSFDMA office at (315) 475-1101.

February 14-17, 2005. *Empire State Fruit and Vegetable Expo*, in Syracuse, New York. **Mark your calendars now:** more information forthcoming.

February 16-19, 2005. *North American Berry Conference- a joint conference with the North American Bramble Growers Association*, in Nashville, Tennessee. More information forthcoming as it becomes available.

GOVERNOR REQUESTS DISASTER ASSISTANCE FOR NEW YORK FARMERS-*42 Counties Suffer Devastating Crop Losses from Adverse Weather This Summer*

Governor George E. Pataki has requested disaster assistance from the U.S. Department of Agriculture (USDA) for farms in 42 counties that have been adversely affected by weather this growing season. The Governor made the announcement on September 16, 2004, following a tour of CY Farms in Genesee County - one of many farms across Upstate that have been damaged by the severe weather.

"The constant rain and other adverse weather conditions that occurred this summer have made this one of the most challenging seasons ever for farmers across the State," Governor Pataki said. "The large amount of rain we've received this summer damaged crops and resulted in lower than normal crop yields and this is clearly having a negative financial affect on our farmers." "By requesting this Federal assistance, we will ensure that New York's farms are eligible for critical Federal assistance that can help our farmers cope with this difficult situation," the Governor added. This request for disaster assistance is the Governor's third request this season. The Governor previously sent letters to USDA Secretary Veneman on April 27 for extreme cold and frost, and July 14 for rain, hail and high winds. This most recent request addresses counties adversely affected by excessive rain and flooding, and brings the total number of counties adversely affected by weather this year to 42 statewide.

Since early this spring, New York State has received excessive amounts of rain with counties reporting anywhere from 5 to 12 inches above normal since April. Counties included in the disaster assistance request include: Albany, Allegany, Cattaraugus, Cayuga, Chautauqua, Clinton, Columbia, Dutchess, Erie, Fulton, Genesee, Greene, Herkimer, Jefferson, Lewis, Livingston, Madison, Montgomery, Monroe, Nassau, Niagara, Oneida, Ontario, Orange, Orleans, Otsego, Putnam, Rensselaer, St. Lawrence, Saratoga, Schuyler, Seneca, Steuben, Suffolk, Sullivan, Tompkins, Ulster, Washington, Wayne, Westchester, Wyoming and Yates.

U.S. Representative Thomas M. Reynolds stated, "The heavy rains this summer had far-reaching effects, impacting farms all across Western New York and New York State. Agriculture is our state's number one industry, and we need to do all we can to help our farmers that were hurt by the poor conditions this summer. This request for federal assistance is an important first step in aiding these farms in their recovery."

Senator Mary Lou Rath commented, "This year's extreme weather conditions have put Genesee County farmers at a competitive disadvantage in the marketplace. I commend Governor Pataki for aggressively pursuing federal assistance for the farmers in our community and for working with state and local officials to continue improving economic conditions for the agriculture industry."

Assembly Republican Leader Charles H. Nesbitt was recorded as saying, "We are all aware that the weather this summer has been a terrible disappointment and hindrance for farmers. The request being made by Governor Pataki is definitely warranted given the importance of agriculture to New York State's economy. On behalf of the farmers in my district, I want to thank the Governor for his support." Excessive rain presents a host of problems for farmers, ranging from difficulty working in the fields due to mud, the introduction of pests, fungus and rot associated with wet growing conditions, to the loss of quality and quantity of crops harvested. Crops most heavily affected by the rain this season include hay, field crops and annual vegetable crops.

State Agriculture Commissioner Nathan L. Rudgers said, "2004 has been the year of rain for most of New York State, which has destroyed the chance for many of our farmers to have a profitable growing season. Year after year, New York farmers have been adversely affected by weather-related disasters and I appreciate Governor Pataki's diligence and support in obtaining the financial assistance our farmers need at this time." In addition to the challenges associated with the rain, grape farmers are having an exceptionally difficult year as many of the vines and buds, which would have borne fruit this year were destroyed due to the extreme cold temperatures last winter. New York's grape harvest is currently underway and it is estimated to be 25 percent smaller than last year. If the requested counties receive a disaster designation from the USDA, farmers within those counties and the counties contiguous to the designated counties will be eligible to be considered for low-interest emergency loans from the Farm Service Agency (FSA). FSA considers each loan application on its own merits, taking into account the extent of losses, security available, repayment ability, and other eligibility requirements.

James W. Tuffey, Director of the State Emergency Management Office, said, "As we continue to monitor and coordinate activities, this has been a season of never-ending storms. The Governor's team of response agencies is doing everything possible to help local communities and ease personal hardships." Governor Pataki is dedicated to improving the economic vitality of agriculture in New York State. Since 1995, Governor Pataki has cut school property taxes for farmers up to 100 percent; slashed workers' compensation rates for farmers by more than 25 percent; strengthened New York's agricultural district laws; introduced the Pride of New York Program; helped protect approximately 28,000 acres from development in

perpetuity by devoting a total of $68 million to farmland protection projects and committed $4.1 million for nearly 180 agricultural projects under his Grow New York initiative.

Agriculture is a $3 billion industry in New York. The sale of New York vegetables generated $321 million last year, ranking New York sixth in the nation for fresh market and eighth for processed. New York is the second largest cabbage producer, third largest for sweet corn, fourth for snap beans and fifth for peas, cauliflower and squash.

(Reprinted from: Department of Agriculture and Market News, 16 September 2004. For more information contact: Jessica A. Chittenden, 518-457-3136 or email **jessica.chittenden@agmkt.state.ny.us**

NEW YORK STATE GROWER SHOW

Horticulture in New York is a diverse mix of greenhouses, nurseries, fruit and vegetable growers, direct marketers and garden centers. Horticulture businesses are equally diverse, often active in more than one segment of the industry. The dilemma has always been how to get the various buyers and sellers together without having to attend innumerable small shows. You now have a solution – The New York Grower Show!

The New York Grower Show brings all of horticulture together in one great show!

Started in 1999, the show has quickly grown to 103 exhibitors displaying in 123 booths. Attendance has ranged from 1200-1700.

The education portion of the show offers top quality seminars from our education partners, The New York State Flower Industries and The Federation of Farmers Markets of New York. Lee Publications sponsors additional recognized speakers to meet the needs of the fruit, vegetable and nursery industries. The 2004 New York Grower Show will be held November 3 - 4, 2004 in the Verizon Center of Progress Building at the New York State Fairgrounds in Syracuse, NY. This new location is easy to get to and offers plenty of space for this growing show. The facility offers easy access to allow display of equipment of any size. Contact Lee Publication Trade Show Division for more information. Call 1-800-218-5586 or e-mail dwren@leepub.com or visit http://www.nygrowershow.com/.

NY STATE AGRICULTURAL SURVEY 2003

As a primary source of information, the Agricultural Survey is one of the largest and most important conducted by the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS). Farmers are contacted during early June to take part in this nationwide survey of American agriculture. The resulting information is used to make reliable state, regional, and national estimates of crop acreage, grain stocks, and livestock inventories.

The New York Agricultural Statistical Service in Albany handles the New York portion of the survey. This survey is particularly vital, providing the first clear indications of the potential production of major crops for 2004. Producers themselves rely on the data to reach valid production, marketing, and investment decisions. Congresspersons and regulators use the information to produce better regulations and farm programs. Industry analysts, extension agents, farm organizations, and agricultural lenders need the information for a variety of reasons. It is therefore important for farmers to participate in the survey to ensure that local agriculture is accurately portrayed. Most producers selected for interviews are notified by mail. "We safeguard the confidentiality of all survey responses," Steve Ropel, State Statistician, said. "Data about individual operations are used only in conjunction with information from other producers." New York agricultural statistics published by NASS are available at ***http://www.nass.usda.gov/ny/***. For more information, call 800-821-1276.

NY Fruit Fast Facts: New York State agricultural production returned over $3.1 billion to the farm economy in 2003. About 25 percent of the state's land area, or 7.65 million acres, are used by the 37,000 farms to produce a very diverse array of food products. Apples and grapes lead New York fruit crops in value, followed by tart cherries, pears and strawberries. New York ranks in the top ten nationally for all five of these fruit crops.

- ***Apples*** - New York ranks 2nd nationally with receipts worth about $223 million in 2003. Three general areas produce most of the apples: along the southern Lake Ontario shore, along the Hudson Valley, and along the upper Lake Champlain Valley. New York's leading varieties are McIntosh, Empire, Rome, Idared and Red Delicious.

- ***Grapes*** - Wine and juice grape production place New York 3rd behind California and Washington. The crop was worth $38.6 million in 2003. Two-thirds of the production was for juice and one-third went into wines. The four major producing areas are: Lake Erie area, the Finger Lakes, the Hudson Valley and the eastern end of Long Island.

- ***Tart Cherries*** - Production in New York ranks 5th in the Nation. Tart cherry production totaled 7.2 million pounds with a value of $2.26 million.

- ***Pears*** - Production ranked 4th in the nation with 14,800 tons and had a value of $5.51 million.

NY Small Fruit Fast Facts:

- ***Strawberries*** - are the 3rd most valuable fruit in New York and places New York 7th in national production. Growers harvested 5.00 million pounds in 2003. The crop returned $7.75 million to growers. Nationally, the strawberry crop for 2003 was placed at 2.08 billion pounds, up 11 percent from 2002.

- ***Blueberries*** - production for the Empire State remained at 2.10 million. The 2003 crop was valued at $2.57 million, a 1 percent increase from $2.55 million in 2002. The U.S. estimate for blueberries is 190 million pounds, down 1 percent from the 192 million pounds produced in 2002. New York ranks 9th in blueberry production.

- ***Red raspberries*** - production for 2003 totaled 2.30 million pounds, an increase of 53% from 2002. Acreage harvested remained the same at 450 acres, but yields were exceptionally good and pushed production up. The value of the crop also increased to 5.76 million dollars. This increase was fueled by the higher production and an increased price per pound due to good quality.

- The combined value of New York's berry crops totaled $10.3 million. This is 4 percent of the $285 million value of all New York's tree fruits, small fruits and grapes.

BERRY FARMING: KEY QUESTIONS TO CONSIDER BEFORE YOU BEGIN

Lori Bushway, Senior Extension Associate in Berry Crops, Department of Horticultural Sciences Cornell University, Ithaca, NY

Perhaps you are considering diversifying your current operation or starting a new venture and are considering small fruits as a possibility. How can you determine if small fruit farming may be right for you or if a new crop will be a profitable addition to your existing venture? The following checklist, developed by Lori Bushway, will assist you in your decision-making process. Get the ball rolling by asking yourself the following questions:

1) **What is your market?**

- What berry products are produced already in adequate supply in your area?
  - Would the market support additional suppliers of the same products?
  - Are there unique market opportunities available that your berry products might fill?
- How will you market your crop?
  - Pick your own (PYO). What's the population within a 20-mile radius?
  - Direct Market. Location, Location Location!
  - Wholesale. Do you have a cooler? Sell all before a single berry is picked.
- How much can you reasonable expect to sell to this market?
  - 4,000 pints of raspberries?
  - 3,000-7,000 quarts of strawberries?
  - 6000 lbs of blueberries?
- How much will it cost to transport your product to this market?

2) **What is your budget?**

- Consider the costs of site preparation, establishing planting, irrigation, managing planting, labor...
- Your plant material cost per acre might run:
  - Blueberries - 870 to 1,090 plants/acre about $5200 to $6500
  - Raspberries - 1,452 plants/acre about $1,900
  - Strawberries - 5,000 to 14,000 plants /acre about $1,250 to $3,500

- You might expect positive cash flow:
  - Blueberries: 10th -13th fruiting year, life of planting could be > 40 years
  - Raspberries: 2nd or 3rd fruiting year, life of planting is about 10 fruiting years
  - Strawberries: 1st fruiting year, life of planting about is 3-5 fruiting years
  -

3) **Will these new crop(s) fit your growing schedule without serious conflicts?**
   - What else are you growing? When do you not want to be busy with berry crops?
     - Blueberries - early spring pruning then harvest peak mid-Aug
     - Summer Raspberries - early spring-prune & trellis then harvest July
     - Strawberries – early winter mulch, early spring remove mulch, frost protection, harvest June peak then renovation
   - For all – planting late spring, worrying about late spring frost during bloom, irrigation, weed control, spring peak in disease management, insect management, late summer leaf analysis...

4) What is your proposed planting location like?

- Very few sites are naturally ideal. When evaluating a site consider:
  - Where will you access water for irrigation?
  - What are winter temperatures? Frost pocket? Microclimate?
  - Diseases & insects? Wildlife & weeds?
  - Is there adequate sun? Is the soil well drained?
  - What did your soil test say? pH? organic matter? phosphorus?...
  - What the history of that site? The past & future crop rotation?
  - Adequate parking for PYO?
  -

5) **What will you face in the way of weeds, diseases and pests?**
   - Control measures are not plentiful in berry crops. Minimize potential problems at the outset:
     - Plant resistant or tolerant cultivars (varieties).
     - Plant only healthy nursery material.
     - Thoroughly consider your site choices and promote healthy soil.
     - Plant to provide adequate room for growth.
     - Properly manage water & nutrients.
     - Develop regular scouting routines to monitor pest presence and development
     - Deal with pest problems proactively whenever possible and appropriate

6) Where can I find more information? http://www.fruit.cornell.edu/berry.html

BEACH PLUM PRODUCTION AND MARKETING

Richard Uva, Postdoctoral Associate and Thomas Whitlow, Associate Professor, Department of Horticulture, Cornell University, Ithaca, NY

Beach plum (*Prunus maritima* Marsh.) is a shrub native to the Atlantic coast with most populations occurring in sand dunes from southern Maine through Maryland. The fruit is a small plum (purple-blue and rarely yellow) with a flavor that varies from astringent to relatively sweet when ripe. The tart fruits gives jam and jelly a distinctive and sought after flavor. The tradition of beach plum collection and processing persists today as a small but thriving cottage industry in coastal communities, with hotspots on Cape Cod, Eastern Long Island and the Jersey Shore's Island Beach State Park. Fruit of this native plum is being wild-collected to make preserves and jellies that are sold to summer tourists and the gourmet preserve niche market. Uncooked plums are only rarely eaten.

With funding from Northeast SARE (http://www.sare.org/), Cornell Horticulturists together with Massachusetts Cooperative Extension and several growers from around the Northeast have lead a program to develop cultivation methods for beach plum. Successful orchards have been established and approximately 40 farms are experimenting with beach plum in the Eastern U.S. The typical participants are small farms, many of which produce berries, fruits and vegetables. At this point, less than 10 growers have plantings of 1/2 to 1 acre in size, others are growing fewer plants on a trial basis. Most orchards have been established in the last 3 years and many will bear their first crop in 2005.

Research Results-At Cornell, we have evaluated the effects of irrigation, mulch, and fertilizer on the growth and yield of beach plum at a test orchard on sandy soil.

Growth and yield were significantly greater in fertilized than in unfertilized treatments, while irrigation and mulch had no effect. The most serious problem for fruit production was brown rot fungi (*Monilinia* sp.) for which controls are available. We have found that beach plum has similar cultural requirements and pests as other commercially grown plums. However, beach plum's flowers are not borne on spurs, but on new wood as with peach. While beach plum can be grown well inland, it is important that it is planted on well-drained soil.

Expanding Markets - In September of 2003 we conducted a series of interviews with 6 gourmet chefs in the New York City area. Each chef was given 5 pounds of beach plum fruit to experiment with and to share their results with us. The chefs were excited about beach plum in general. One chef requested to purchase additional fruit from us and added a beach plum sauce to his restaurant menu for the holiday season. Another chef plans to put on a beach plum dinner in late winter of this year, where every course contains beach plum in some part of the recipe. This upscale restaurant market is always looking for something innovative and could possibly be a lucrative outlet for beach plum and other specialty fruits.

Horticulturally speaking, beach plum is in an interesting position. While still primarily a wild collected fruit, it is on the verge of becoming a cultivated crop. The fruit is in high demand by a limited audience and cannot be purchased through regular distribution channels. There are opportunities for those interested in growing beach plum who are willing to pursue niche marketing and for those doing value added preserves. Additionally, because growers are currently using plants grown from wild-collected seed, there is great opportunity for crop improvement. Superior types could be easily selected from wild stock. At Cornell Orchards, and several other orchards across the northeast, we are evaluating beach plums grown from a range-wide seed collection. We plan on screening the plantings for disease resistance, fruit quality, yield and antioxidant content.

For more information on the project, our website (http://www.beachplum.cornell.edu/) includes photos, management information, goals of the project, contact information, news and research updates.

MACHINERY SELECTION - CROP SPRAYERS FOR ORCHARDS AND VINEYARDS

Andrew Landers, Pesticide Application Technology Specialist, Department of Entomology, NYSAES Cornell University, Geneva, NY

Background Considerations

Before deciding to purchase new equipment, consider the following:

Existing and future farm policy and equipment-Existing and future farm policy will dictate the area, variety and rotation of the crops to be sprayed; different crops will have different spraying requirements, such as types of chemical, application rates and the timing of applications.

Timeliness-Timeliness of spraying is very important to the grower. Pesticides must be applied at the correct time to ensure their success. The following points will affect timeliness of application-

a) area to spray per season,
b) frequency of spraying,
c) land characteristics,
d) weather
e) workload of the farm.

Alternative spraying techniques - Growers need to consider novel sprayer designs such as directed deposition sprayers. Each new design needs to be carefully assessed; do the benefits outweigh the extra costs? With increasing legislation concerning the environmental aspects of pesticide application, techniques that improve deposition, reduce drift and reduce tank rinsate must be considered.

Modify an existing sprayer - Many modern components for updating sprayers can be bought via catalogues or via the Internet and can be supplied by nozzle manufacturers and specialist component manufacturers. These very comprehensive catalogues or web pages are illustrated with excellent diagrams to aid on-farm sprayer modification. A number of manufacturers offer electronic aids that help monitor the sprayer, self-fill hoses, chemical probes, etc.

Home construction - If the farmer is mechanically minded or has a competent mechanic and a lot of spare time, one may consider making one's own sprayer. Sprayer component catalogues are a most useful source of information to aid the construction of farm sprayers. The alternative to making a sprayer oneself is to commission a sprayer from a manufacturer; a number of manufacturers will construct a sprayer to the client's specification

Custom application - Growers based upon small acreages should consider the role of the custom applicator before purchasing a sprayer. Alternatively, a grower, after purchasing a specialist sprayer, may have time to establish a business

as a custom applicator and thus help spread the high costs involved.
Aerial spraying is normally a specialized contracting service and can be financially attractive to some farmers, particularly when early applications are required.

Purchasing a Sprayer

Before purchasing a new sprayer, consider the following criteria in regard to sprayer selection:

1. Construction
Durability is required.

2. Tank
The tank should be made of non-corrosive materials such as plastic, glass-fiber or stainless steel and be adequately supported by the framework. Stainless steel is stronger but heavier. Tank agitation is very important to ensure that the chemicals are well mixed, so check that the pump is large enough. Access for tank filling is most important, check the height and ease of filling. Many modern sprayers are fitted with a self-fill hose for water and an induction bowl for chemical filling. Use of tank rinsing aids (small spinning discs or nozzle heads) fitted in the top of the tank is recommended. They reduce the amount of washing water, reduce the time required to wash out sprayer tanks and eliminate operator contamination.

3. Pump
The choice exists between a centrifugal, diaphragm, diaphragm/piston or a piston pump. The use of a diaphragm or piston pump, whilst more expensive, has less moving parts in contact with the solution; the farmer may consider a positive displacement pump as being the most favorable, particularly where a variable forward speed is required. The pump should have a high capacity to ensure a good flow to the nozzles as well as providing good agitation for the tank contents.

4. Nozzles
Farmers should consider nozzles made from modern materials, which are, long lasting, color coded for easy selection and are easily replaced. Modern anti-drip devices use rubber diaphragms that ensure longer life and require less maintenance.

5. Filters
Adequate filtration is so important to ensure that the sprayer output is maintained and remains accurate, inadequate filtration results in excessive nozzle wear and nozzle blockages. If the farmer is intending to use wettable powders and fine sprays the extra in-line filters can be fitted. Filter accessibility for maintenance should be considered.

6. Pipes and Hoses
Check hoses for size, large bores ensure a good flow and helps reduce foaming. Check the strength of the materials used e.g. check that the pipes don't kink thus reducing or preventing flow.

7. Framework
The frame needs to be light but strong, it needs to be strong enough for the treatment it may receive on your farm. The overall strength of the sprayer should be considered. The sprayer should be well made using strong, durable materials but not too heavy. A heavy sprayer with a large tank will cause soil compaction on most soils. The choice of tires will affect the degree of compaction and one should check that alternative tire sizes are available. Low ground pressure tires are most useful if one sprays in early spring.

8. Controls
Access to the controls from the tractor cab is important, particularly if one is applying toxic sprays. The use of electric or cable controls may need to be considered, they add to the cost but help to provide a better and safer environment for the operator, allowing him/her to concentrate on driving at the correct speed and direction.

9. Monitors
Are any monitors fitted as standard, are they adequate or too sophisticated? Monitors are an important aid to greater accuracy. Monitoring systems can be part of a fully automatic constant spray control; do you require such a system? To obtain the best from any monitoring system you need to understand fully how the system works.

10. Ease of Attachment
Trailed sprayers are often easier to attach than mounted sprayers, a lot of time can be wasted with some sprayers if they are difficult to attach. A number of manufacturers use a lower linkage hitch for their mounted sprayers. Other manufacturers mount the pump on the sprayer frame, this saves a lot of time trying to fit a pump and torque chain onto the tractor.

11. Cost
The capital cost of a sprayer is very important; as is its resale value, check that the sprayer holds its value. Alternative methods of finance such as leasing may be considered. Maintenance costs should also be considered, as these costs can be quite high.

12. Machinery Dealer
Close proximity to a reliable dealer is so important to ensure a speedy service when the sprayer breaks down; machines

tend to break down at the busiest time of the year! The availability and cost of spare parts from the supplier should also be considered. Surveys show that people buy from people.

13. Ease of Maintenance
Good maintenance will aid accuracy and the sprayer should be designed to allow for easy maintenance, e.g. the sprayer should be able to be drained of all liquids to avoid frost damage; filters should be easily dismantled or self flushing to ensure a good liquid flow.

14. Power requirement
Ensure your existing or future tractors will be able to pull and drive the sprayer over varying terrain.

15. Operator
The person who is to operate the sprayer should be considered. The operator should be responsible, well trained and highly motivated. The degree of sophistication of the sprayer may be too great for some people; there is a definite need for operator training. A comprehensive instruction manual should be provided which explains in detail the finer points of the sprayer. All operators should attain a level of competency to ensure the safe and correct application of agricultural chemicals. A skilled operator is so important to ensure accuracy of application. Operator comfort and safety is very important especially if one is spending many hours spraying during the season.

16. Personal preference
The final consideration is that of personal preference, this may be based upon:

a) One's own experience, gained from many years of crop spraying
b) Advice obtained from a specialist adviser, or neighboring farmers who have experience of a similar land-type and climate.
c) Advice may also come from machinery dealers who, like neighboring farmers, have experience of local conditions.

After considering all the previous points, one should then draw up a short list of suitable sprayers and see them demonstrated on your farm, comparing each sprayer under your field conditions and your standard of operation and management.

Use this checklist to compare sprayers

	Machine A	Machine B	Machine C	Machine D	Machine E	Machine F
1. Construction						
2. Tank						
3. Pump						
4. Nozzles						
5.Filters						
6.Pipes and Hoses						
7. Framework						
8. Controls						

(Reprinted with permission from the author: Farm Machinery: Selection, Investment and Management by Andrew Landers Farming Press, UK. ISBN 0852365403 Obtainable from the author.)

WORKER TRAINING PROGRAMS PROMOTE FOOD SAFETY CONCEPTS

Betsy Bihn, National GAPS Program Coordinator, Depart of Food Science, Ithaca, NY

For many fruits and vegetables, the only person that handles (touches) the produce before it reaches the consumer is a farm worker. Many fruits and vegetables are not washed in any way prior to sale. Whatever is on the hands of the farm worker can be directly transferred to the produce they harvest, pack, and handle. There have been several reports of produce related food borne illnesses that were traced back to poor hygiene.

It is well documented in the United States that many Americans do not always wash their hands after using the bathroom. It is likely someone working on your farm has this same tendency. Fecal pathogens can be transferred to produce by people who do not wash their hands after using the bathroom. Some foreign workers come from countries where putting toilet paper in the toilet is not a common practice due to plumbing issues. This is not acceptable in the US, but unless you specifically educate workers about proper toilet paper placement they may be unaware of appropriate behavior.

All farm workers should be trained to follow basic health and hygiene practices while they are working on the farm for both personal and produce safety. To protect the produce you grow, train all farm workers about the importance of proper hand washing and toilet use. This includes all hired farm workers, as well as family members and friends who may be

working on the farm. You may think you are not in the hygiene business, but if you grow and harvest fresh fruits and vegetables, hygiene should be one of the most important aspects of your business.

Developing a worker-training program does not require a lot of money. Simply gather workers together and share your expectations with them. Demonstrations help convey specific information and techniques. Talking about going to the bathroom, placing toilet paper in the toilet, and washing hands is not glamorous and may make you uncomfortable but it is extremely important that fecal material does not end up on fresh fruits and vegetables. If you need assistance with developing a training program, the National GAPs Program has created several educational materials to help with this process including a training video entitled *Fruits, Vegetables, and Food Safety: Health and Hygiene on the Farm*. It is available in English and Spanish in VHS or DVD formats. Visit www.gaps.cornell.edu to order a copy. If you have specific concerns or questions, please fee free to contact me at315 787 2625.

A PICTURE IS WORTH A THOUSAND WORDS, PART III: STRAWBERRIES

Cathy Heidenreich, Plant Pathology, NYSAES Cornell University, Geneva, NY

This is the third in a series of articles spotlighting websites that provide excellent pictures of small fruit diseases, pests, and disorders. This month we are focusing on strawberry web sites. A short description of each web site follows the html address. Happy viewing!

Strawberry Diagnostic Tool

(http://www.hort.cornell.edu/department/faculty/pritts/BerryDoc/**)**

Author Marvin Pritts developed the on-line Berry Diagnostic tool for Strawberries, Raspberries, Blueberries, and Ribes as a companion to the NRAES Production Guides. It is to assist with the identification of diseases, insects, chemical injury and physiological disorders that affect berry crops in northeastern North America and eastern Canada. Simply click on the strawberry fruit to be re-directed to the strawberry section that holds images of various strawberry diseases, pests and disorders, organized according to symptom appearance on various plant parts.

Strawberry Diseases in Michigan

(http://www.msue.msu.edu/vanburen/e-1728.htm**)**

This is an on-line Michigan State University Fruit IPM Extension Bulletin by S. Perry and D. C. Ramsdell. Images are linked within the body of the text describing each disease, but they also appear as a gallery at the end of the bulletin.

Identification of Diseases on Strawberry Fruit

(http://www.gov.on.ca/OMAFRA/english/crops/facts/straw_diseases.htm**)**

This guide, found on the Ontario Ministry of Agriculture and Food website, was developed Pam Fisher. It includes both disease images and descriptions for botrytis, anthracnose, and leather rots.

Strawberry Pests

(http://www.uky.edu/Agriculture/Entomology/entfacts/fruit/ef207.htm)

Ric Bessin, extension entomologist from the University of Kentucky, provides both digital images and descriptions of strawberry pests.

BUILDING YOUR SMALL FRUIT REFERENCE LIBRARY

Cathy Heidenreich, Plant Pathology, NYSAES Cornell University, Geneva, NY

A reference library can be an invaluable asset, saving both time and money for the small fruit grower. Careful planning and selection of materials for your reference library can provide you with a broad knowledge base that is timely and in some respects, timeless. While the initial investment could range between $200-$500, the time, effort, and money saved by having these resources on hand rapidly repays the initial investment. What types of materials might be appropriate or desirable as part of your reference library? Here are some initial suggestions to get you started, and a review of one potential addition to your collection.

To begin, list aspects of your operation requiring decision-making. Add reference materials that facilitate making these decisions. For example, your new strawberry field

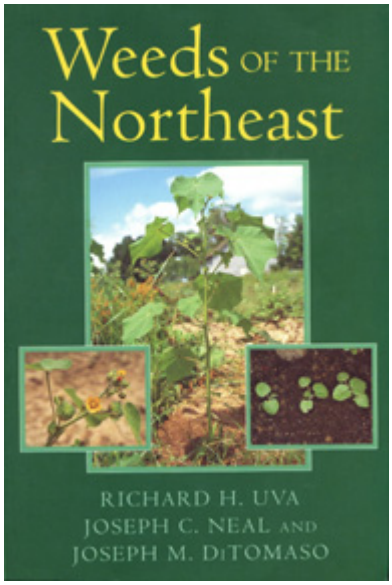
is over run with some sprawling weed that threatens to engulf the whole planting. What to do? A good reference book on weed identification is the best place to start. Once your problem weed has been identified, then you can take appropriate action. While your action plans may change according to products available or label directions, the identity of your weed will not.

What other topics might you want to have covered in your collection? You may want to have on hand a general reference on soil science, which includes soil health management, soil fertility etc. Another beneficial resource may be a crop specific cultural guide to practices and procedures for production of that particular crop or group of crops, providing information on site and cultivar selection, planting establishment, maintenance, crop harvest and storage. Identification guides for pests such as insects, biotic and abiotic diseases are invaluable for making management decisions. "How-to" manuals for equipment selection, operation and maintenance are critical to have on hand. Training videos for workers, general references on marketing, advertising, and economics. Taylor your collection to meet the needs of your particular business.

These days, not all reference materials come between two covers. Consider adding a computer with Internet access for weather reports, timely disease and insect information, quick references to various topics, program calendars and educational opportunities. An added benefit for that monthly connection fee could be setting up your own web site for consumer advertising and attraction to your local business.

And finally, remember that a library is always the better for a new addition from time to time, as necessity and availability dictate, to keep this a renewable resource.

Book Review: Weeds of the Northeast



Weeds of the Northeast is a practical guide to the identification of common and economically important weeds of the northeastern United States and southern Canada. It is also a reference book for those aspects of weed biology and ecology important to weed management. Relying on vegetative rather than floral characteristics for identification, this up-to-date manual describes 299 weed species that infest agronomic and horticultural crops, turfgrass areas, nurseries, gardens, and noncrop areas such as landscapes and roadsides. In compiling the species list, we defined the Northeast as the region south to Virginia, north to Maine and southeastern Canada, and west to Wisconsin.

The weeds included are those that decrease crop yields or quality, reduce the aesthetics or functionality of landscapes and turfgrass areas, or adversely affect human or animal health. Also included are species with the potential to spread and infest more acreage and crops than they do now, as well as species considered crops in some areas and weeds in others. For example, orchardgrass and timothy are often cut for forage yet are highly competitive weeds in orchards and reduced-tillage areas. Similarly, red maple is a desirable landscape tree, but its seedlings are a constant aggravation in mulched landscape beds.

The book contains several tools for identifying weeds. Specimens with unusual vegetative characteristics, such as thorns, square stems, whorled leaves, milky sap, an ocrea, palmately compound leaves, or dissected leaves, can be rapidly identified using the shortcut identification tables (pp. 5-8). For weedy grasses, the grass identification table at the back of the book provides diagnostic information in an easy-to-use tabular key. The main tool for identifying an unknown specimen, however, is the dichotomous key to all the species described in the book. This key, unlike those found in most identification manuals, relies on vegetative characters, such as leaf orientation, lobes on the leaf margin, and presence and placement of hairs, rather than on floral characters to separate the species. The vegetative key and the diagnostic tables are each designed to narrow the choices to a few possible species. Reading the descriptions of the species and comparing the specimen with the drawings and photographs can then confirm the identity of the specimen.

The species descriptions are organized into four main groups: nonflowering or spore-producing plants, monocots (including grasses and grass-like weeds), herbaceous broadleaf (dicot) weeds, and woody weeds. Within each main group, the weeds are presented in alphabetical order by family name, genus, and species. The species descriptions provide a wealth of information in a condensed format: what the weed looks like at various stages of growth, how it propagates and spreads, the crops or management systems in which it is common, its geographic distribution, whether it is toxic to

humans or livestock, and more. Accompanying each description are drawings and color photographs of identifying characteristics, seeds, and early and late stages of growth.

About the Authors: Richard H. Uva a Postdoctoral Associate in the Department of Horticultural Sciences at Cornell University. Much of the information in this book, and the way it is presented, is derived from his master's thesis. Joseph C. Neal is Associate Professor of Weed Science at North Carolina State University, Raleigh. Joseph M. DiTomaso is Associate Weed Specialist at the University of California, Davis. He and Joseph Neal were formerly on the faculty of Cornell University. Andrew F. Senesac, a key contributor to this book, is Weed Science Specialist for Cornell Cooperative Extension at the Long Island Horticultural Research Laboratory, Riverhead, NY. His cooperation and counsel on this project were invaluable.

Awards: 1997 *Extension Division Educational Materials Award*, American Society for Horticultural Science
1997 *Award for Outstanding New Extension Publication*, The New York State Association of County Agricultural Agents

You can order this book from Cornell University Press

IDENTIFYING, BUILDING, AND SELLING THE VALUE IN *YOUR* BUSINESS

Bob Weybright, Extension Support Specialist, New York Agricultural Innovation Center, Cornell University, Ithaca, NY

In the previous article (NYBN Vol.3 No.9), I discussed the issue of selling based on value rather than price in one's business. Admittedly, this concept is easier to discuss than implement. In this article, I will take a closer look at "value" - its attributes, what constitutes value, and how value can be identified.

Value itself is not a new concept in the business world. In fact, it has been recognized by the accounting profession in a term called "good will." "Good will" can, in fact, be assigned a numeric value and accounted for on financial reports. When a business is sold, it is not uncommon for the buyer to pay more for "good will" than the tangible assets of that business. A critical and key task is to assign a financial value to this "good will" that is believable by the rest of the world. This has been and will most likely continue to be an issue of much discussion in the financial world as it is based primarily on individual beliefs and opinions.
While it might be beneficial to determine a dollar figure associated with a business's "good will," we must first understand what characteristics are in place, and how they increase the value of a business to a point where they could be classified as "good will." To keep things simple, rather than getting into a dollar valuation of "good will," I will focus on identifying attributes that might create value and influence the buying decision. The assistance of a good financial advisor would be required to properly assign a dollar value to "good will."

To briefly summarize a key point from last month's article: Value is a combination of benefits, both tangible and intangible, that must be present in order for a buyer, whether a corporation or an individual, to feel that the purchase contained an appropriate level of benefits to satisfy the need that drove the desire to purchase in the first place. Essentially, what this means is that attributes of value are industry, company, and situation specific.

This is not to say that attributes of value are random. There must be reasons behind each and every value attribute. Some common value attributes one can consider include:

- Product safety • Price • Package material
- Personal safety • Order method • Seasonality
- Curiosity • Order convenience • Family ties
- Convenience • Delivery method • Emotional ties
- Variety • Pack size • Product story
- Quality • Color

The list of possibilities is not finite. Essentially, value attributes are anything that could separate you, your product, or company from direct competition or anything that could serve as a substitute for your product or service.
However, determining what attributes to consider for providing value to a particular business is done individually. Knowledge of one's customers and market will guide which attributes to be considered. One important and key attribute not to be dismissed is one's reputation. An example found in the recent press is that some poor business decisions of a private nature caused a drastic decrease in company worth of an established company owned by a certain household maven. This example demonstrated how personal reputation could raise or ruin one's business. What this means is that awareness of personal relationships as well as past business relationships must be considered in determining what value might be present.

To maximize the success when selling based on value, one needs to understand that value is an internal and variable feeling. When assessing one's business, and what value is provided, there are some key considerations to keep in mind:

- Value varies by individual or demographic group – The methods and styles of marketing specialty vegetables, meats, and cheeses demonstrate the depth of this concept. Other more common categories would include convenience foods, organic and natural foods.
- Value can vary from year to year – Remember the olive green appliances from the early 1970s? What would a consumer pay for an appliance in that color today?
- Value can change across the year – Would you want to be selling jellybeans in July? Maybe if you were a wholesaler taking spring shipment orders. Large retailers have clearly identified the seasonal value factor. Look at when you can buy snow blowers in the store. Now consider when they are put on sale and the associated price reductions to sell them quickly.
- Economic climate affects the value decision – Gourmet products are in much more demand when the economy is doing well.
- Regional consumer taste shifts – Look at the styles of barbecue sauce and how strongly attached to them the people of the region are. Ask a person from the South East (vinegar based sauce region) how much they would pay for a bottle of tomato based barbecue sauce from the north, and vice versa.
- Geographic region determines what is perceived as having greater value – How much value is there in earthquake insurance in New York versus California? The value is minimal even thought the Hudson River is a fault line.

In short, when looking at how to price one's services or products by value offered, three factors – customer, product and environment – need to be considered and balanced against each other. However, by far the most important area of understanding lies around the customer. Learning who they are, where they are from, and what brings them to be your customer will provide insight into learning what attributes you should have or strengthen, and those that need work. You will also learn what value customers place on your product or service to determine whether you are pricing correctly or need to adjust your price up or down. One more thing to keep in mind – once you have completed this analysis it is then time to start over, as time never stops and customers never stop changing.

As you continue to work at and adjust the value proposition of your business the process will become easier, you will increase your sales success, and your customer base will continue to grow. The net and ultimate benefit of all this is differentiation from the competition and a sales advantage that makes your business the one to beat.

(Reprinted from: Smart Marketing, September 2004. **"Smart Marketing**" is a monthly marketing newsletter for extension publication in local newsletters and for placement in local media. It reviews the elements critical to successful marketing in the food and agricultural industry. Articles are written by faculty members in the Department of Applied Economics and Management at Cornell University.)

ADDENDUM:

Dr. Bill Turechek, now with the USDA Beltsville, has provided us with his new contact information, which is as follows:

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E: turechew@ba.ars.usda.gov

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

Questions or Comments about the New York Berry News?

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

OR *Email*: mcm4@cornell.edu

WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 19th, 2004

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	77	43	63	+3	93	2580	253	2.32	1.62	27.15	8.52
Glens Falls	77	40	61	+3	77	2160	135	1.75	1.05	24.22	5.84
Poughkeepsie	78	49	66	+4	111	2721	272	3.44	2.67	29.58	8.19
Mohawk Valley											
Utica	77	39	63	+4	95	2221	104	1.18	0.13	32.33	10.53
Champlain Valley											
Plattsburgh	77	42	60	+2	72	2053	2	0.01	-0.69	23.34	5.31
St. Lawrence Valley											
Canton	79	35	60	+3	76	1994	150	0.14	-0.77	24.87	5.62
Massena	79	43	60	+3	73	2031	102	0.01	-0.82	23.20	5.63
Great Lakes											
Buffalo	80	42	65	+4	107	2325	78	0.05	-0.75	23.67	4.52
Colden	78	41	63	+4	91	2032	210	2.11	0.99	31.06	8.78
Niagara Falls	80	42	65	+5	108	2271	20	0.11	-0.75	22.38	3.70
Rochester	80	47	64	+3	102	2251	75	0.18	-0.52	25.50	9.06
Watertown	79	34	62	+3	84	1979	92	0.30	-0.47	20.44	5.14
Central Lakes											
Dansville	78	41	62	+2	87	2080	-105	2.51	1.73	32.13	14.12
Geneva	79	45	63	+2	91	2238	72	1.33	0.56	26.65	8.86
Honeoye	82	41	63	+2	96	2186	-86	3.04	2.31	29.20	11.60
Ithaca	78	41	62	+4	87	2180	221	3.09	2.25	32.88	13.69
Penn Yan	79	46	63	+3	95	2367	201	1.68	0.91	22.76	4.97
Syracuse	80	41	65	+4	103	2464	265	1.03	0.12	29.32	9.13
Warsaw	79	39	61	+4	79	1860	182	1.77	0.83	30.88	9.79
Western Plateau											
Alfred	77	41	62	+4	83	2039	260	3.10	2.26	33.53	13.43
Elmira	78	42	63	+4	93	2262	194	3.25	2.53	31.26	13.19
Franklinville	79	36	61	+6	82	1820	301	2.42	1.50	30.90	9.62
Sinclairville	79	41	63	+5	91	2046	331	2.46	1.34	32.66	8.77
Eastern Plateau											
Binghamton	74	39	62	+3	84	2162	160	4.06	3.29	28.64	9.54
Cobleskill	77	38	61	+3	77	2136	273	3.48	2.59	28.02	7.43
Morrisville	77	41	61	+4	82	1905	132	2.72	1.77	32.46	11.86
Norwich	79	41	62	+5	88	2146	281	3.60	2.69	30.83	10.39
Oneonta	78	40	62	+6	88	2324	613	3.06	2.22	35.07	13.15
Coastal											
Bridgehampton	80	50	66	+3	113	2353	33	2.45	1.65	26.80	6.74
New York	84	52	72	+5	152	3330	247	1.93	1.16	30.79	9.58

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

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

WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, September 26th, 2004

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	79	41	63	+5	91	2671	283	0.00	-0.63	27.15	7.89
Glens Falls	81	37	60	+5	71	2231	159	0.00	-0.70	24.22	5.14
Poughkeepsie	80	41	63	+4	89	2804	287	0.00	-0.77	29.58	7.42
Mohawk Valley											
Utica	79	40	62	+6	87	2308	136	0.18	-0.79	32.51	9.74
Champlain Valley											
Plattsburgh	79	42	61	+6	81	2134	35	0.48	-0.16	23.82	5.15
St. Lawrence Valley											
Canton	80	37	61	+6	75	2069	182	0.00	-0.84	24.87	4.78
Massena	80	38	61	+7	80	2111	141	0.05	-0.72	23.25	4.91
Great Lakes											
Buffalo	81	43	64	+5	97	2422	109	0.00	-0.76	23.67	3.76
Colden	80	39	61	+5	79	2111	239	0.00	-1.04	31.06	7.74
Niagara Falls	83	42	65	+6	105	2376	59	0.00	-0.79	22.38	2.91
Rochester	82	42	64	+5	96	2347	104	0.00	-0.63	25.50	8.43
Watertown	78	36	60	+5	75	2054	118	0.01	-0.69	20.45	4.45
Central Lakes											
Dansville	80	38	61	+3	76	2156	-93	0.00	-0.75	32.13	13.37
Geneva	79	43	62	+5	87	2325	97	0.00	-0.72	26.65	8.14
Honeoye	83	38	63	+3	89	2275	-67	0.02	-0.68	27.76	9.46
Ithaca	81	37	60	+4	75	2255	243	0.00	-0.80	32.88	12.89
Penn Yan	81	43	65	+7	104	2471	243	0.01	-0.71	22.77	4.26
Syracuse	82	42	65	+7	104	2568	304	0.00	-0.86	29.32	8.27
Warsaw	79	40	61	+7	82	1942	223	0.00	-0.89	30.88	8.90
Western Plateau											
Alfred	80	38	61	+5	76	2115	289	0.00	-0.83	33.53	12.60
Elmira	81	37	61	+5	80	2342	218	0.00	-0.70	31.26	12.49
Franklinville	80	35	59	+5	64	1884	327	0.00	-0.91	30.90	8.71
Sinclairville	80	39	61	+6	77	2123	362	0.00	-1.05	32.66	7.72
Eastern Plateau											
Binghamton	76	39	61	+5	80	2242	188	0.33	-0.44	28.97	9.10
Cobleskill	79	40	61	+6	82	2218	307	0.41	-0.43	28.43	7.00
Morrisville	79	41	60	+5	76	1981	163	0.15	-0.76	32.61	11.10
Norwich	79	40	61	+5	78	2224	311	0.11	-0.73	30.94	9.66
Oneonta	80	40	61	+7	80	2404	653	0.00	-0.82	35.07	12.33
Coastal											
Bridgehampton	79	46	61	-1	77	2430	28	0.00	-0.77	26.80	5.97
New York	83	54	70	+5	140	3470	278	0.00	-0.76	30.79	8.82

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

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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, October 3rd, 2004

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	74	39	58	+3	56	2727	293	1.04	0.41	28.19	8.3
Glens Falls	73	34	56	+3	41	2272	166	0.33	-0.32	24.55	4.82
Poughkeepsie	75	44	60	+4	69	2873	305	3.00	2.30	32.58	9.72
Mohawk Valley											
Utica	73	42	58	+4	58	2366	153	0.37	-0.50	32.88	9.24
Champlain Valley											
	74	36	55	+2	36	2170	37	0.35	-0.26	24.17	4.89
St. Lawrence Valley			ey								
Canton	74	35	56	+4	44	2113	195	0.36	-0.42	25.23	4.36
Massena	75	33	55	+3	35	2146	145	0.03	-0.66	23.28	4.25
Great Lakes											
Buffalo	76	38	60	+4	72	2494	129	0.47	-0.23	24.14	3.53
Colden	73	37	57	+4	49	2160	250	0.22	-0.72	31.28	7.02
Niagara Falls	75	37	60	+4	71	2447	78	0.61	-0.09	22.99	2.82
Rochester	74	39	59	+3	65	2412	116	0.13	-0.45	25.63	7.98
Watertown	71	36	56	+3	42	2096	122	0.51	-0.14	20.96	4.31
Central Lakes											
Dansville	73	37	57	+1	47	2203	-96	0.36	-0.32	32.49	13.05
Geneva	72	40	57	+2	54	2379	103	0.18	-0.52	26.83	7.62
Honeoye	73	38	57	+1	53	2328	-70	0.47	-0.23	28.23	9.23
Ithaca	72	39	56	+2	43	2298	245	0.27	-0.50	33.15	12.39
Penn Yan	73	42	60	+5	70	2541	265	0.27	-0.43	23.04	3.83
Syracuse	75	45	60	+5	73	2641	327	0.24	-0.55	29.56	7.72
Warsaw	71	35	56	+4	41	1983	233	0.15	-0.67	31.03	8.23
Western Plateau											
Alfred	72	37	57	+4	48	2163	300	0.48	-0.28	34.0	12.32
Elmira	73	38	58	+4	57	2399	232	0.12	-0.55	31.3	11.94
Franklinville	73	34	55	+4	36	1920	335	0.29	-0.57	31.19	8.14
Sinclairville	72	37	56	+4	46	2169	374	0.28	-0.70	32.94	7.02
Eastern Plateau											
Binghamton	69	40	57	+3	50	2292	199	0.67	-0.03	29.64	9.07
Cobleskill	75	39	56	+2	40	2258	311	1.29	0.53	29.72	7.53
Morrisville	71	40	55	+3	39	2020	170	0.26	-0.59	32.87	10.51
Norwich	74	41	57	+4	49	2272	325	0.58	-0.20	31.52	9.46
Oneonta	73	44	58	+6	56	2460	678	1.69	0.92	36.76	13.25
Coastal											
Bridgehampton	77	45	60	+1	71	2501	34	3.44	2.69	30.24	8.66
New York	78	55	67	+4	119	3589	307	4.22	3.52	35.01	12.34

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

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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, October 10th, 2004

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	75	33	54	+2	35	2762	296	0.00	-0.63	28.19	7.67
Glens Falls	74	27	51	+1	22	2294	165	0.00	-0.63	24.55	4.19
Poughkeepsie	76	35	56	+2	45	2918	313	0.00	-0.69	32.58	9.03
Mohawk Valley											
Utica	76	31	54	+3	38	2404	160	0.02	-0.75	32.90	8.49
Champlain Valley											
Plattsburgh	75	30	52	+2	27	2197	41	0.02	-0.54	24.19	4.35
St. Lawrence Valley											
Canton	78	28	53	+4	34	2147	207	0.12	-0.63	25.35	3.73
Massena	78	26	54	+4	39	2185	163	0.04	-0.59	23.32	3.66
Great Lakes											
Buffalo	75	35	56	+3	47	2541	138	0.00	-0.67	24.14	2.86
Colden	75	33	52	+2	28	2188	251	0.04	-0.80	31.32	6.22
Niagara Falls	76	35	57	+4	56	2503	95	0.00	-0.63	22.99	2.19
Rochester	78	34	56	+2	48	2460	126	0.00	-0.56	25.63	7.42
Watertown	77	26	55	+5	48	2144	144	0.00	-0.63	20.96	3.68
Central Lakes											
Dansville	76	32	52	-2	26	2229	-108	0.00	-0.63	32.49	12.42
Geneva	77	35	55	+3	40	2419	109	0.00	-0.65	26.83	6.97
Honeoye	79	33	54	0	38	2366	-73	0.03	-0.61	28.26	8.62
Ithaca	76	31	52	+2	26	2324	241	0.01	-0.76	33.16	11.63
Penn Yan	76	36	56	+4	48	2589	279	0.00	-0.65	23.04	3.18
Syracuse	78	34	57	+4	55	2696	344	0.01	-0.73	29.57	6.99
Warsaw	74	32	53	+4	36	2019	247	0.01	-0.76	31.04	7.47
Western Plateau											
Alfred	75	32	52	+2	23	2186	297	0.00	-0.70	34.01	11.62
Elmira	78	29	52	+1	25	2424	226	0.00	-0.63	31.38	11.31
Franklinville	75	27	49	0	14	1934	329	0.05	-0.79	31.24	7.35
Sinclairville	75	33	52	+2	24	2193	374	0.04	-0.87	32.98	6.15
Eastern Plateau											
Binghamton	72	34	54	+3	38	2330	210	0.00	-0.64	29.64	8.43
Cobleskill	77	31	53	+3	33	2291	319	0.02	-0.68	29.74	6.85
Morrisville	75	33	52	+2	24	2043	170	0.00	-0.77	32.87	9.74
Norwich	76	31	52	+2	24	2296	326	0.00	-0.73	31.52	8.73
Oneonta	76	32	53	+3	27	2487	683	0.00	-0.77	36.76	12.48
Coastal											
Bridgehampton	71	33	55	-2	41	2542	25	0.00	-0.70	30.24	7.96
New York	76	50	63	+4	93	3682	329	0.00	-0.65	35.01	11.69

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

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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, October 17th, 2004

	Temperature				Growing Degree Days (*Base 50*)			Precipitation (*inches*)			
	High	***Low***	***Avg***	***DFN[1]***	***Week***	***YTD[2]***	***DFN***	***Week***	***DFN***	***YTD***	***DFN***
Hudson Valley											
Albany	65	34	51	+2	15	2777	288	0.44	-0.19	28.63	7.48
Glens Falls	66	36	51	+4	14	2308	166	0.76	0.13	25.31	4.32
Poughkeepsie	68	35	52	+2	19	2937	307	1.17	0.51	33.75	9.54
Mohawk Valley											
Utica	66	36	50	+2	15	2419	155	0.95	0.25	33.85	8.74
Champlain Valley											
Plattsburgh	65	34	50	+3	13	2210	39	0.30	-0.26	24.49	4.09
St. Lawrence Valley											
Canton	70	30	48	+2	7	2154	201	1.28	0.58	26.63	4.31
Massena	65	31	50	+3	14	2199	163	0.54	-0.09	23.86	3.57
Great Lakes											
Buffalo	68	33	50	-2	19	2560	131	1.83	1.16	25.97	4.02
Colden	63	33	47	-2	3	2191	236	0.82	0.00	32.14	6.22
Niagara Falls	69	32	50	-2	18	2521	86	0.64	0.04	23.63	2.23
Rochester	63	35	49	-3	12	2472	112	0.58	0.07	26.21	7.49
Watertown	66	31	50	+2	13	2157	140	1.22	0.65	22.18	4.33
Central Lakes											
Dansville	63	33	47	-4	3	2232	-131	0.67	0.11	33.16	12.53
Geneva	62	38	49	-2	3	2422	88	0.74	0.11	27.57	7.08
Honeoye	68	32	48	-4	7	2373	-95	0.59	-0.04	28.85	8.58
Ithaca	65	31	48	-2	5	2329	226	0.58	-0.16	33.74	11.47
Penn Yan	64	39	50	0	14	2603	269	0.34	-0.29	23.38	2.89
Syracuse	70	37	52	+2	23	2719	341	0.85	0.15	30.42	7.14
Warsaw	57	30	45	-3	2	2021	235	1.27	0.55	32.31	8.02
Western Plateau											
Alfred	63	33	47	-2	2	2188	281	0.67	-0.03	34.68	11.59
Elmira	64	31	49	+1	9	2433	214	0.35	-0.28	31.73	11.03
Franklinville	62	28	45	-2	0	1934	315	0.47	-0.36	31.71	6.99
Sinclairville	63	32	47	-1	2	2195	361	0.84	-0.05	33.82	6.10
Eastern Plateau											
Binghamton	62	36	48	-2	7	2337	200	0.60	-0.03	30.24	8.40
Cobleskill	68	38	49	+2	5	2296	308	0.27	-0.39	30.01	6.46
Morrisville	65	38	48	0	7	2050	163	0.82	0.06	33.69	9.80
Norwich	65	33	48	0	4	2300	315	0.72	0.02	32.24	8.75
Oneonta	66	34	48	+2	4	2491	672	0.79	0.05	37.55	12.53
Coastal											
Bridgehampton	65	41	54	+1	33	2575	22	1.61	0.88	31.85	8.84
New York	70	46	58	+1	57	3739	331	0.38	-0.25	35.39	11.44

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