The New York Berry News

CORNELL UNIVERSITY

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What's Inside

Currant News & Events:

January 7, Sturbridge, MA: For the first time, this meeting will be associated with the annual Tree Fruit meeting and trade show in Sturbridge, which is sponsored by the New England Fruit Growers Association and the UMass Extension Fruit Program. For info call Dominic Marini at (508) 378-2546.

January 22-25, 2003: *North American Strawberry Growers Association Annual Meeting*, Puerto Vallarta, Mexico. Contact Erin Griebe at 810-229-9407. Email: NASGAHQ@aol.com.

January 29, 2003: *New York State Berry Growers Association Annual Meeting* (in conjunction w/ *NY Farmers Direct Marketing Association*) will be held at Sheraton Inn Conference Center in Saratoga Springs, NY. For more information or for registration materials contact the NY Farmers Direct Marketing Association at 315-475-1101. Or send inquiries to 7350 Collamer Road, East Syracuse, NY 13057.

February 4-6, 2003: *The Mid-Atlantic Fruit & Vegetable Growers Conference.* Hershey Lodge and Convention Center Hershey, Pa. For more information contact Maureen Irvin, (717) 677-4184.

February 18-19, 2003: *The Niagara Peninsula Fruit & Vegetable Growers' Association* and the *Ontario Horticultural Crops Conference* have joined together to bring you the Ontario Fruit & Vegetable Convention (OFVC), Brock University, St Catharines. Theme "Growing Together". Contacts: Chairman: Tony Sgambelluri - 905-945-1713 (Cell 905-651-1264); Vice Chair: Bob Cobbledick - 905-945-9057; Trade Show Chairmen: Ross Parker - 905-562-4136 and Ralph Troup - 905-563-826

Cabrio EG fungicide

On September 30, 2002 the EPA approved the Federal Registration for Cabrio EG fungicide (formerly BAS 500). Cabrio EG fungicide is registered by BASF. Cabrio EG is strobilurin fungicide and is labeled for use on blueberry, raspberry, blackberry, and strawberry and is active against a wide range of diseases (unfortunately, not mummyberry) . Even still, this is a significant registration for small fruit, particularly raspberry. ***Cabrio is not yet registered in New York State.*** However, we anticipate a NY registration soon and hope that it can be obtained by the beginning of next years growing season. To learn more about Cabrio link to: www.basf.com/businesses/consumer/agproducts/productsheets/Cabrio_TIB.pdf.

— Strawberry —

The first frost/freeze (depending on where you live) hit New York early this week—signaling that autumn is really upon us. If you haven't done so yet, fall herbicide applications should be your top priority. Last months issue of the NYBN covers fall weed management for strawberry, raspberry, and blueberry in detail. This months issue covers the basics for choosing and planting fall cover crops (Yes, a little late for some but not for others). In fields where red stele is a problem, it is the time to apply Ridomil Gold or Aliette. See last months article on *Phytophthora* management for more details.

— Raspberry —

Fall bearing raspberries are beginning to wind down. However, the rains showers have spurred some gray mold activity. Both Rovral and Elevate are labeled on raspberry and can be used to reduce spread of the disease on remaining fruit. You may also be noticing raspberry leaf spot. In severe cases, this disease can cause extensive defoliation so it is important to keep the disease in check. Nova 40W is labeled for raspberry leaf spot and can be applied to fall bearing raspberries. This is also the time of year when you should begin to prune out spent floricanes. This is particularly important if cane diseases such as anthracnose, cane blight, or spur blight were present. Diseased canes should be pruned out preferentially and destroyed. If the prunings are left near a planting they can reinfect the planting again next season.

Late leaf rust is becoming quite evident at this time, particularly in Heritage. In this months NYBN Mike Ellis and Omer Erincik give a detailed account of this disease including management.

Fall Cover Crops

Frank Mangan, University of Massachusetts Extension, Amherst, MA

As crops are harvested you want to be thinking about cover crops that will be seeded on our fields. Here is some information about some of the more common cover crop choices for Massachusetts. There's a more complete list in the New England Vegetable management Guide (pages 16 and 17).

Non-Legumes: Winter rye is easily the most common cover crop used by growers in Massachusetts, and for good reason. It is inexpensive, easy to get and establish, and can be seeded fairly late into the fall and still take. It consistently over winters here and will continue to grow in the spring producing lots of organic matter. Some growers find it difficult to incorporate in the spring if it is left to grow into May. Seeding rate: 90-120 lbs/acre.

Oats can be seeded in the fall and will come up quickly, similar to winter rye. Unlike winter rye, oats will winterkill here in Massachusetts and will not regrow in the spring. For this reason some growers prefer it over winter rye since it is easier to manage in the spring. It might have to be lightly incorporated into the soil in order to germinate. Enough growth is required in the fall to give adequate cover through the winter and early spring. Try to seed by the first week of September. Growers along the coast can plant later. Make sure the oats have not been cooked (used as an animal feed). Seeding rate: 100 lbs/acre.

Ryegrass is used by some growers because of its thick root system that is thought to mop up more nitrogen than winter rye or oat. There are two types: annual and perennial. Despite their names, the annual ryegrass may over winter and the perennial ryegrass may winterkill depending on when you seed them. If you have not seeded them before and would like to evaluate them, I would recommend that you seed a little of each in order to see their growth habits. I have only used these cover crops in the early spring. The seed is small and light, so specialized equipment will be needed if seeding a large area. Seeding rate: 30-40 lbs/acre.

Legumes: Clovers are used by some growers as a nitrogen source. There are several types available. Like ryegrass, I have only used clovers as an early spring cover crop. A clover will have approximately 2.5% nitrogen whereas hairy vetch (see below) averages around 3.5% (this compares to winter rye that is usually below 1%). Clovers are a very small-seeded cover crop that needs specialized equipment to establish. They can be needed by hand in a small area, but if you want to do several acres, you will need specialized equipment. Seeding rate: 10-20 lbs/acre.

Hairy Vetch is an excellent cover crop for Massachusetts. It can be seeded up to mid September and will survive the winter. Growers near the coast or on the cape and islands can seed vetch up till October or even later. When left to grow long enough in the spring, hairy vetch has supplied over 100 lbs/acre of nitrogen.

It is very important that the appropriate rhizobia species is used for hairy vetch (the rhizobia for hairy vetch will work for all vetches and peas). Without the rhizobia the vetch will not give the desired effects. We have been recommending you mix the vetch with either winter rye or oat. There are several reasons for this:

1) Both oat and winter rye are very efficient in taking up nitrogen from the soil remember, the vetch is getting most of its nitrogen from the atmosphere, so it does not need much from the soil. By taking up more nitrogen in the late summer and fall we are reducing the risk of contaminating surface or ground water and the nitrogen is recycled so that it can be used by next years cash crop.

2) The oat and rye can produce tremendous amounts of valuable organic matter if allowed to grow long enough.

3) Both of these cover crops will give better erosion control than vetch alone since they emerge and establish themselves more quickly than vetch. This is especially important when vetch is seeded after September 1. We have been recommending 40 lbs/acre of oat or rye with 30-40 lbs/acre of hairy vetch. If you are using a grain drill then you can use seeding rates as low as 30 lbs/acre of vetch. If you are spinning the cover crop on and lightly disking it in then a rate of 35-40

lbs/acre is suggested. Many growers prefer the use of oat rather than rye because of the tremendous growth of rye that occurs in the spring. This can be desirable if you are looking for increased organic matter in your soils, however some growers find the amount of biomass created by these two cover crops too much to handle. In addition, we have found that we get much more growth of the vetch in the spring when seeded with oat than when seeded with rye. The rye will compete with the vetch in the spring. (*Source:* UMass Vegetable Notes, Vol. 13, No. 19, September 5 , 2002 via UMass Berry Notes, Vol 14, No. 16.)

End-of-Year Weed Scouting

A. Richard Bonanno, University of Massachusetts Extension, Amherst, MA

It is worthwhile to take the time to check your fields for weed problems at this time of year. A quick scouting can alert you to problems that will be expensive to solve if they get out of control and can give you clues that will help you in designing your weed management program for next year.

Things to look for when you scout: How Many? How dense are the weeds? If weeds are very dense, they may be having an impact on your yields. This is especially true if these weeds emerged early in the season, when competition is greatest. If weeds come into your field during the period of greatest crop growth, you may want to consider changing your weed management program.

Which Weeds? Identifying weeds can help you identify potential problems before they get out of hand, and can help you decide if you need to modify your weed control program. Weeds like yellow nutsedge, hedge bindweed, and quackgrass are spreading perennials, which have underground parts that enable them to spread throughout whole fields. Because these weeds can be very damaging, and are very difficult to control, they are worth "nipping in the bud." In addition, keep an eye out for annual weeds which are new to your field or increasing in numbers. Some weeds can be very difficult to control in some or all of the crops in your rotation. Galinsoga, for example, is hard to control in cole crops, peppers, and squash. Nightshades are difficult to control in tomatoes for growers who rely on herbicides for control, because they are in the same family as tomatoes. Velvetleaf is hard to control in sweet corn. Spot treatment with Round-up, or hand pulling or hoeing, is worthwhile to eradicate small patches of particularly threatening weeds.

What worked? It is also useful to look at the whole field and evaluate the effectiveness of our weed control efforts. If some weeds are generally escaping, identify them. They may point to weaknesses in your herbicide or cultivation program. If mostly grasses, or mostly broadleaves are escaping, it may mean you need to adjust either the rates or the timing of our grass or broadleaf herbicides. You may also find the New England Vegetable Management Guide useful. This manual contains a chart listing the effectiveness of vegetable herbicides on most of the common weeds in New England. You can use this guide to find an herbicide labeled for your crop which might give better control. Where are the weeds? Weeds in the rows or planting holes are much more damaging to crop yields than between-row weeds. Weeds in rows may be an indication that cultivation equipment needs adjustment, or cultivation needs to be done earlier. Mapping weedy spots, and keeping some kind of permanent record of weed surveys, can help you evaluate your weed management over the years.

What to do now? Once crop harvest and weed scouting is compete, disk or till the fields to destroy existing annual weed growth and to reduce or prevent weed seed dispersal. If perennial weeds such as bindweed or quackgrass are present, consider an application of Roundup before cold weather arrives. Time spent on these tasks now will greatly improve your level of weed management next season. (*Source:* Massachusetts Berry Notes, Vol 14, No 16.)

Organic Matter Application-Can You Apply Too Much

M.D. Orzolek, Department of Horticulture, Pennsylvania State University, University Park, PA

Fall is an excellent time to clean-up fields and plan for future crop nutrient requirements as well as increasing soil organic matter content for your farm field management program. Since most vegetable crops have already been harvested, growers should consider the broadcast application of a non-selective herbicide to 1) eliminate both perennial and difficult annual weeds in the field, 2) increase the efficiency of retrieving plastic mulch and 3) help establish a cover crop. Fall is also an excellent time to add soil amendments to increase soil organic matter. Why increase soil organic matter? High soil organic matter (greater than 3.5%) will increase the water holding capacity of soil, increase soil nutrient reserves, increase soil microbiological activity and increase soil tilth.

Organic matter has long been known to improve soil fertility and tilth, which in turn, have increased crop yields. "Organic matter composts", however, is a poorly defined term used for a wide variety of materials - all of which impact soils differently. Therefore, prior to recommending the use of a specific organic compost for a specific purpose it must be tested to determine the nutritive value of the material and the total maximum amount of material to apply per acre. Organic compost/manures can consist of a variety of materials including: chicken - beef - hog - sheep - horse manures,

straw, leafs, sawdust, table scraps, treated sewage sludge, peatmoss, etc. Addition of organic composts to soil should take into account; soil type, affect on soil pH, nutrient content of compost, crops to be planted in rotation after addition of compost to soil, and rainfall or total water application through irrigation.

The recommended soil pH range for optimum plant growth, nutrient availability and best bacterial activity is 6.5 to 7.2. The soil pH affects nutrient availability and at a pH of 5.0 to 5.5, both iron and boron become more available to plants causing potential toxicity symptoms while phosphorus and potassium are less available to plants and may result in nutrient imbalances in the plant.

While liberal applications of organic composts (5 to 10+T/A) has been a rule of thumb for many growers in the last decade, it has lead to some very difficult problems in the fields where the organic compost was applied. The most serious problem has been a large release and availability of nitrogen resulting in almost all cases of very extensive vegetative growth at the expense of reproductive growth (reduced fruit production and quality). There has been an extreme build-up of phosphorus in the soil especially with the use of animal manures at rates greater than 5 T/A; resulting in soil P levels in excess of 1000 lbs./A - potential for opening phosphorus mines in PA. Also the high P levels in soil probably contribute to the high P levels in the Susquehanna River and ultimately, the Chesapeake Bay. There also can develop an imbalance in the ratios of soil K-Mg-Ca availability which will have a profound affect on the quality for fruit produced in the field (poor color, soft tissue, blossom end rot, poor shape).

Therefore, important to a good fertility program is calculating the total nitrogen availability in the soil from all potential nitrogen sources. Nitrogen sources include; graded fertilizers (10-10-10 would contain 10% nitrogen per 100 lbs. material), legume cover crops (hairy vetch produces the equivalent of 100 lbs N/A), animal manures (need to know N-P-K analysis before field application) and organic composts (peanut hulls, straw, etc). Plants generally respond to nitrogen when there is low organic matter in the soil, soil consisting of a large percentage of sand, and/or a cold, wet growing season (much like 1996). How much nitrogen should be applied for the crop to be grown? The crop nitrogen requirement equals the recommended rate of nitrogen application minus the contribution from the previous crop (residual N), minus the contribution from cover crops (especially legumes) planted in rotation, and minus the contribution from manure. Using this method to calculate a crop's nitrogen requirement will reduce/eliminate runoff and leaching of nitrogen and other elements from the soil.

An example of organic matter application is given below in reference to a pumpkin fertility program based on the nitrogen requirement for the crop. A grower plants pumpkins on ground that was in soybeans last year; was planted to hairy vetch after the soybeans were harvested; and 3 tons/A of chicken manure (6-4-3 analysis) was broadcast and incorporated in the spring prior to seeding pumpkins. How much nitrogen should the grower apply to the pumpkin crop? Since the recommended nitrogen application for pumpkins grown on heavy soils is 60 lbs per acre, the grower needs to subtract 25 lbs residual N produced by the soybeans, 60 lbs N produced by the vetch (killed vetch in late March) and 18 lbs N from the manure application. [60 - (25+60+18) = surplus 43 lbs/A nitrogen]. The grower will not have to add any nitrogen to the pumpkin crop since he has a surplus of 43 lbs/A N over and above the required 60 lbs/A nitrogen recommended for pumpkin production.

In conclusion, a sound, well planned organic matter management program will provide; 1) optimum fertility for maximum crop yields and quality, 2) minimize runoff and leaching of water soluble elements, and 3) reduce total fertilizer costs over time. (*Source:* The Vegetable and Small Fruit Gazette, Volume 6, No. 10)

Late Leaf Rust of Raspberry

Michael A. Ellis and Omer Erincik, Department of Plant Pathology, OARDC, Wooster, OH

Late leaf rust is a potentially serious disease of red raspberries. Late leaf rust does not affect black raspberries or blackberries. The disease can affect leaves, canes, petioles, and fruit. Economic losses occur from fruit infection and premature defoliation. Because it usually appears late in the season, and only occasionally in a severe form, some consider it to be a minor disease. However, losses due to fruit infection have reached 30% in some commercial red raspberry plantings in Ohio. The wild red raspberry, *Rubus strigosus*, in the eastern United States is very susceptible to this disease. A number of cultivated varieties originating from this species also are highly susceptible. While late leaf rust occurs throughout the northern half of the United States and southern Canada, it is more common east of the Mississippi River. In recent years, its occurrence has increased in the northern areas of the Midwest, and it has caused significant losses.

On mature leaves, small chlorotic, or yellow, areas initially form on the upper surface of infected leaves (Figure 1A). These spots may eventually turn brown before leaves die in the fall. Unless the disease is severe, foliar infections may be difficult to see. Small pustules filled with yellow to orange powdery spores (not waxy

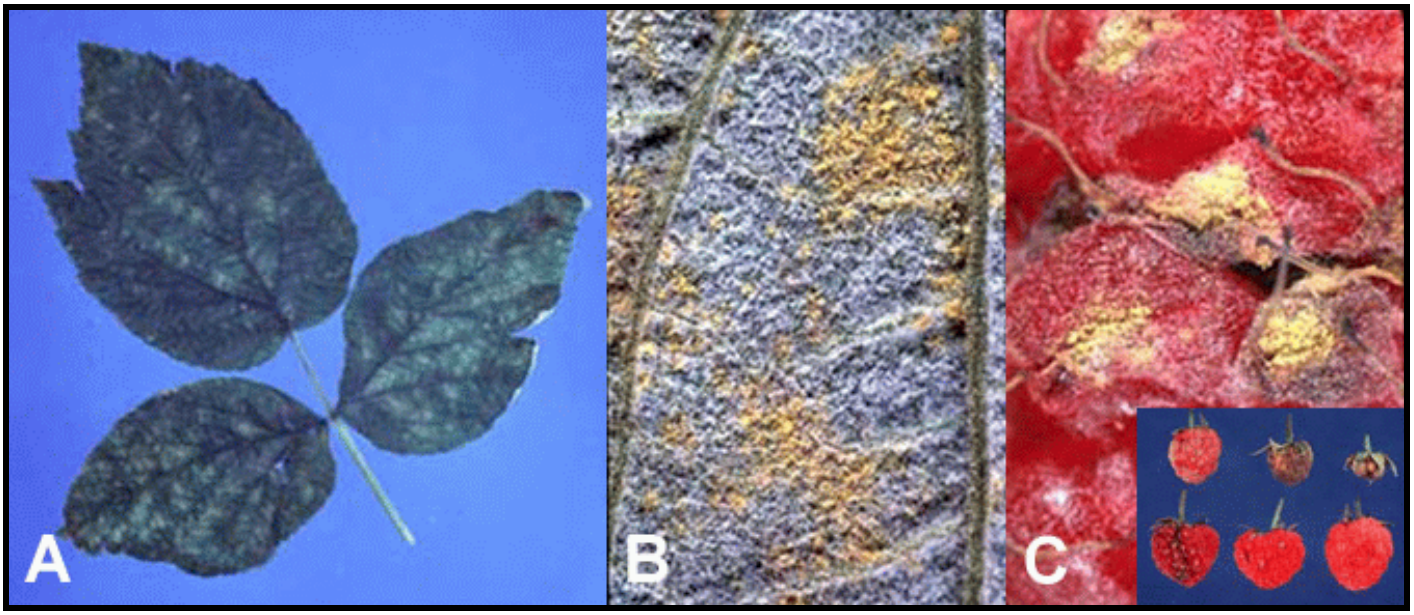

Figure 1. A) Early season symptoms of late leaf rust on infected red raspberry leaf. Note the chlorotic, or yellow, areas on the upper surface of the leaf, **B)** Small pustules filled with yellow powdery spores on the underside of an infected red raspberry leaf, **C)** Pustules on individual drupelets on infected fruit. Note the masses of yellow spores, Late leaf rust symptoms on red raspberry fruit (insert).

like the spores of orange rust) are formed on the underside of infected leaves (Figure 1B). Badly infected leaves may drop prematurely, and in years when the disease is severe, canes may be bare by September. Flower calyces, petioles, and fruit at all stages of development may be attacked.

On fruit, pustules develop on individual drupelets, producing yellow a masses of spores, which make the berries unattractive and unacceptable for fresh market sales (Figure 1C). Infections may also occur on leaf petioles and canes.

Disease Development

Late leaf rust is caused by the fungus *Pucciniastrum americanum*. Unlike the fungus that causes orange rust (a common disease on black raspberry and blackberry), the late leaf rust fungus is not systemic. The fungus is heteroecious, meaning that it attacks two different hosts at different stages of its life cycle. The rust fungus produces two types of spores (urediniospores and teliospores) only on red raspberries. The alternate host for the rust is white spruce (*Picea americanum*), on which another type of spore (aeciospore) is produced.

Aeciospores are released from infected white spruce in mid-June to early July and are capable of infecting raspberry during this period. In early July, urediniospores (powdery-yellow to orange spores) start to form on the underside of infected raspberry leaves or flower parts. These urediniospores can continue to cause infections on raspberry leaves and fruit throughout the growing season.

Another type of spore (teliospore) develops on infected leaves in the fall and serves as the overwintering form of the fungus. In the following year, the teliospores germinate and form yet another type of spore (basidiospore), which infects white spruce needles during rainy periods from mid-May to early June.

Several recent studies indicate that the fungus apparently does not need the aeciospore stage to survive on raspberries, because the disease is found year after year in regions remote from any spruce trees. It is probable that the fungus overwinters on infected raspberry canes as urediniospores or teliospores that serve as the source of primary inoculum for new infections the following season.

Disease Management

1. *Use healthy, disease-free planting stock.* One of the best ways to avoid the disease is to start the planting with healthy planting stock. Since the fungus can be carried in or on planting material, inspection of the planting materials before planting is recommended.

2. *Site selection*. Select a site with good air movement and full sun exposure. Never plant raspberries in shaded areas. Good air movement and sunlight help the foliage and fruit to dry off quickly after a rain or heavy dew. Rapid drying will reduce the incidence of fruit and leaf diseases in general.

3. *Canopy management.* Keep row width between 1 and 2 feet in order to encourage air movement and faster drying. Cane density should not exceed three or four canes per square foot. Always select large, healthy canes when thinning. Control timing and the amount of nitrogen fertilizer to prevent excessive growth.

4. *Control weeds.* Good weed control within and between the rows is essential. Weeds in the planting prevent air circulation and increase drying time, resulting in wet fruit and foliage for longer periods.

5. *Sanitation.* Remove and destroy infected and old fruited canes. Previously infected plant parts serve as a source of inoculum for the disease. Removing and destroying old fruited and infected primocanes greatly reduces the amount of disease inoculum in the planting.

6. *Eradication of alternative and wild hosts.* As previously mentioned, the late leaf rust fungus requires white spruce trees as an alternate host to complete its full life cycle. Eradication of white spruce trees interrupts the life cycle of the fungus and should aid in disease control. Eradication of nearby wild red raspberries that serve as a reservoir for disease is also beneficial for control of the disease.

7. *Use of disease resistance.* Black raspberries and blackberries are immune to the disease. Unfortunately, there are no commonly grown red raspberry varieties that are resistant to the disease.

8. *Fungicide use.* Fungicides that are effective for control of late leaf rust are currently available and are commonly used in commercial plantings.

[*Editor's note:* Nova 40W is the most effective fungicide labeled against rust. Where there is a history of rust and the alternative host is present (see #6), applications should begin in mid-June to early July when the aeciospores are beginning to infect raspberry. Applications could start a few weeks earlier if one suspects that the inoculum is being produced from within the planting, i.e, no alternative hosts are in the vicinity AND conditions favor disease development. However, more research needs to be done to get a better understanding of how to manage this disease when urediniospores serve as the source of primary inoculum.] (*Source:* Ohio State University Fact Sheet SeriesHYG-3210-02 (http://ohioline.osu.edu/hyg-fact/3000/index.html))

Organic Standards Go Into Effect

Christina Stark, M.S., R.D. Nutrition Specialist, Cornell Cooperative Extension

USDA has developed a set of national standards that food labeled "organic" must meet, whether it is grown in the U.S. or imported from other countries. Starting October 21, 2002, foods labeled as organic must meet these standards.

There are specific labeling guidelines for foods depending on the percentage of organic ingredients in a food. According to a fact sheet on Labeling and Marketing from USDA's National Organic Program, the following rules apply.

Foods labeled "100 percent organic" and "organic"

- Products labeled as "100 percent organic" must contain (excluding water and salt) only organically produced ingredients.
- Products labeled "organic" must consist of at least 95 percent organically produced ingredients (excluding water and salt). Any remaining product ingredients must consist of nonagricultural substances approved on the National List or non-organically produced agricultural products that are not commercially available in organic form.
- Products meeting the requirements for "100 percent organic" and "organic" may display these terms and the percentage of organic content on their principal display panel.
- The USDA seal and the seal or mark of involved certifying agents may appear on product packages and in advertisements.
- Foods labeled "100 percent organic" and "organic" cannot be produced using excluded methods, sewage sludge, or ionizing radiation.

Processed products labeled "made with organic ingredients"

- Processed products that contain at least 70 percent organic ingredients can use the phrase "made with organic ingredients" and list up to three of the organic ingredients or food groups on the principal display panel. For example, soup made with at least 70 percent organic ingredients and only organic vegetables may be labeled either "soup made with organic peas, potatoes, and carrots," or "soup made with organic vegetables."
- Processed products labeled "made with organic ingredients" cannot be produced using excluded methods, sewage sludge, or ionizing radiation.
- The percentage of organic content and the certifying agent seal or mark may be used on the principal display panel. However, the USDA seal cannot be used anywhere on the package.

Processed products that contain less than 70 percent organic ingredients

- These products cannot use the term organic anywhere on the principal display panel. However, they may identify the specific ingredients that are organically produced on the ingredients statement on the information panel.

Find additional information on USDA's National Organic Program on-line (www.ams.usda.gov/nop/). There is a consumer fact sheet Organic Food Standards and Labels: The Facts, that answers questions you might get such as the following:

Q: Is organic food better for me and my family?

A: USDA makes no claims that organically produced food is safer or more nutritious than conventionally produced food. Organic food differs from conventionally produced food in the way it is grown, handled and processed.

Q: Does "natural" mean "organic"?

A: No. "Natural" and "organic" are not interchangeable. Other truthful claims, such as free-range, hormone-free, and natural, can still appear on food labels. However, don't confuse these terms with "organic." Only food labeled "organic" has been certified as meeting USDA organic standards.

Lastly, does the organic label really mean what consumers want it to mean? This issue is discussed by David Conner in the September 2002 issue of Smart Marketing, a newsletter from the Department of Applied Economics and Management at Cornell. He reports on a survey of consumers of organic food in Ithaca, New York. He found that while these consumers oppose the use of genetically modified organisms, municipal sewage sludge and irradiation (none of which are allowed on foods labeled organic), the label's meaning is still not well understood. For more information visit the Cornell Cooperative Extension food and Nutrition web site at: www.cce.cornell.edu /food/index.html.
(*Source:* www.cce.cornell.edu/food/fsarchives/091002/organic.html)

Lonely Backers Press For a Forbidden Fruit

Barry Newman, Wall Street Journal, Thursday October 3rd, 2002.

[Editors note: This article was printed in the October 3rd edition of the Wall Street Journal and features an interview with CCE's **Steve McKay** who, as many of us know, has been playing a leading role in developing a market for black currants (and other lesser known berries) in New York!]

What is round, dark-purple, juicy and a "public nuisance," according to Title 13 Section 9-1303 of the Consolidated Laws of New York State?

The Black Currant!

In New York, black currants are berries non grata. The law forbids the fruit. That is because black-currant bushes help spread blister rust, a fungus that kills white pine trees. Maine -- the Pine Tree State -- bans the berry, too, as do South Carolina, North Carolina, Virginia, New Jersey and New Hampshire. Until 1966, it was illegal to plant black-currant bushes anywhere in the U.S. It's still illegal to import them without a special exemption and three years in quarantine.

People in this country tend to confuse black currants with small raisins baked into buns. Those are dried Corinth grapes. It seems someone once misheard "Corinth" as "currant," causing centuries of mix-ups. Most Americans wouldn't know a real black currant if they fell into a piquantly refreshing vat of them.

That is a crushing truth for Steve McKay, an agricultural educator here in Columbia County and the berry's most ambitious booster. Mr. McKay, 49 years old and partial to shirts with leafy patterns, thinks the black currant can take the place of a state apple industry nearly polished off by Chinese imports. As in the misty past when New York was the nation's top black-currant producer, he sees bushes covering 40,000 hectares or more. The black currant, he believes, deserves to be America's next big berry.

On his side are government crop experts, an upstate juice factory, and a former television garden reporter who has founded a company -- Au Currant Enterprises -- to inject black currants into the national fruit stream. All that stands between the berry and big business are a few "pine people," as Mr. McKay calls them, and the law.

"They say, `We have a law, we don't have to worry about anything,'" Mr. McKay said one evening in an attic office bursting with berry-related literature. "I mean, I'm trying to start a billion-dollar industry here." The figure isn't entirely a fantasy: In Europe, where blister rust is under control, the black currant is a billion-dollar berry now.

There is no end to Europe's black-currant concoctions: tea, yogurt, vodka, juices and jams. Sweden has a black-currant cheese, Britain, a black-currant diarrhea remedy. In Nuits St. Georges, where France makes most of its cassis – the black-currant liqueur -- there is a black-currant museum.

In World War II, its citrus supply cut off, the United Kingdom grew black currants as a source of vitamin C. Ribena appeared, a sweet drink named after *Ribes*, the black currant's species. It became a British childhood staple and still is; Ribena sales alone come close to 300 million euros a year.

But GlaxoSmithKline PLC, its maker, won't sell Ribena in the U.S. "We'd have to build a market from scratch," says its spokesman. Coca-Cola, Snapple, Welch's and Libby's all sell black-currant drinks abroad. Kellogg's

has black-currant shredded wheat. In 1996, Ocean Spray did try out a cranberry-currant drink in America. It flopped.

"They did it all wrong," says Mr. McKay. "These marketing people say Americans hate black currants. I give out juice at country fairs. People always love it. Oh, this is so ridiculous."

The roots of Mr. McKay's discontent go back to 1705, when a certain Lord Weymouth shipped some native white-pine seedlings to England. The tree spread across Europe. But in 1887, blister rust broke out in Germany. By then, the U.S. was reimporting seedlings for its depleted forests, and the disease came with them.

The black currant, a European native, crossed the Atlantic with the colonists. But as blister rust ran rampant, foresters realized it didn't jump from pine to pine, but from pine to currant to pine. Saving the tree meant stamping out the berry. Laws were passed, bushes beaten. By the 1930s, the black currant had been wiped from America's memory.

Steve McKay had his first taste of its nectar in Europe at age 18. It was a revelation. He went on to teach farmers about fruit in connection with Cornell University. On the way, he founded the International Ribes Association.

In 1999, he stopped by Clinton Vineyards, 100 kilometers north of New York City, where Ben Feder makes wine from blueberries and rhubarb. Mr. McKay offered him a load of black currants from Canada, the one place with no U.S. import ban. Mr. Feder made 50 cases of cassis. Last year, he made 100. This year, Mr. McKay drove up to Canada for black currants and brought Mr. Feder back a ton.

Clinton Vineyards is in Dutchess County, where farms are often sold to fox-hunting urbanites. Greg Quinn bought an old farm there three years ago and was soon enjoying Mr. Feder's cassis.

Mr. Quinn, 52, used to be the "garden guy" on New York's Fox 5 News. He knew the black currant had legal problems in New York. But he also knew that landowners who grow crops pay lower taxes. He wondered: Could the black currant have tax appeal?

Mr. Feder sent Mr. Quinn to Mr. McKay – and it was business plan at first sight. With a $200,000 (203,000 euro) state grant, they ordered a market study and research to size up the berry's vitamins and minerals. Mr. Quinn founded Au Currant "to convince landowners to grow black currants." He is set to launch a health drink made from imported concentrate.

"This is it -- the moment of entry," Mr. Quinn said over a black-currant-and-soda in his farmhouse kitchen. "Once this thing blows open, the black currant will be a force to reckon with."

Mr. McKay, meantime, says that he had been quietly assured by state officials that New York's law would permit big crops of new rust-resistant black currant varieties. Ans he had the endorsement of Kim Hummer, a top currant authority in the research service of the U.S. Department of Agriculture. "Do I think black currants could be planted and cultivated in New York State without an increase in white pine blister rust?" Ms. Hummer says. "The answer is yes."

The only force to reckon with after that would be the pine people. "The enthusiasm of the currant people is driving the whole issue," say Paul Manion, a pine person and professor of forest pathology at the State University of New York. He worries that black currants are nonnative, that rust-resistance wears off, and that sick seed can be spread far and wide by birds, the wind or plant sales at Wal-Mart.

To which, among many technical arguments, Mr. McKay replies: "They don't understand blister rust and don't want to. It's about common sense and management, not just, 'Oh no, you can't do it.' "

Toward summer's end, Mr. McKay got a taste of the work ahead when he visited the old, gray plant of Clermont Fruit Processors in Germantown, N.Y. Its freezer held 30,000 pounds of black currants from a small Connecticut grower who wants to sell them for juice blends.

"We're seeing the start of an industry," said the manager, Bill Heafy, as Mr. McKay chose a berry from a box and popped it into his mouth. They were a variety prized for rust immunity-not necessarily flavor-by everyone hoping to grow black currants in New York. "Not even tart," Mr. McKay said, making a face. "Bitter. Bitter." "Turned my stomach," said Mr. Heafy.

Driving away from the plant, McKay said, "We're in the problem-solving phase."

Soon after the batch was processed, something worse happened: New York State lawyers decided that merely revising the regulations won't suffice t end the berry ban. The legislature must act. A bill must be drafted. The chairman of the assembly's agriculture committee is noncommital. It looks as if Mr. McKay's patience will have to last at least into next year before he can celebrate the black currant's liberation.

"My attitude," he says, "is not calm."

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:

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WEATHER REPORTS OF TEMPERATURES AND PRECIPITATION THROUGHOUT NEW YORK STATE FOR WEEK ENDING SUNDAY 8:00am, SEPTEMBER 15th, 2002

	Temperature				Growing Degree Days *(Base 50)*			Precipitation (Inches)			
	High	*Low*	*Avg*	*DFN*[1]	*Week*	*Season*[2]	*DFN*	*Week*	*DFN*	*Season*	*DFN*
Hudson Valley											
Albany	91	47	70	8	140	2624	350	0	-0.7	17.18	-1.04
Glens Falls	91	45	68	9	129	2213	230	0	-0.73	16.32	-1.66
Poughkeepsie	87	44	65	2	109	2454	63	0.01	-0.81	24.06	3.11
Mohawk Valley											
Utica	88	41	67	7	123	2351	282	0.31	-0.74	26.57	5.41
Champlain Valley											
Plattsburg	93	46	69	9	132	2157	148	1.24	0.49	19.49	1.88
St. Lawrence Valley											
Canton	93	39	67	8	121	2147	341	1.2	0.29	20.05	1.37
Massena	93	45	69	10	133	2090	198	1.84	1	20.11	3.05
Great Lakes											
Buffalo	91	47	69	7	137	2550	360	0.56	-0.28	16.66	-2.02
Colden	90	43	66	6	111	2088	309	0.56	-0.56	15.42	-6.18
Niagara Falls	93	47	70	8	145	2519	324	0.67	-0.24	15.4	-2.78
Rochester	94	45	70	8	145	2693	574	0.29	-0.41	16.34	0.32
Watertown	86	33	67	7	118	2148	304	0.5	-0.27	15.49	0.66
Central Lakes											
Dansville	94	42	66	4	111	2392	261	0.39	-0.44	17.31	-0.23
Geneva	92	47	68	6	126	2429	316	0.3	-0.47	16.03	-1.29
Honeoye	92	38	66	3	115	2297	84	0.43	-0.34	18.42	1.24
Ithaca	92	42	66	6	114	2268	356	0.11	-0.73	19.57	0.89
Penn Yan	92	50	71	9	145	2601	488	0.29	-0.48	13.44	-3.88
Syracuse	92	45	71	8	146	2701	556	0.4	-0.51	21.11	1.46
Warsaw	88	41	64	7	102	2035	394	1.21	0.23	23.96	3.43
Western Plateau											
Alfred	94	36	63	4	95	2123	385	0.27	-0.57	19.75	0.15
Elmira	95	40	68	7	126	2389	369	0.02	-0.75	17.9	0.25
Franklinville	90	36	62	4	82	1867	381	0.6	-0.37	22.87	2.14
Sinclairville	87	44	65	6	105	2110	434	1.15	0.03	23.67	0.46
Eastern Plateau											
Binghamton	90	44	68	9	132	2308	351	0.01	-0.79	19.5	0.85
Cobleskille	90	43	66	7	114	2218	397	0	-0.91	19.37	-0.69
Morrisville	90	40	65	6	105	1991	257	0.38	-0.59	22.59	2.57
Norwich	92	40	64	5	102	2164	341	0.03	-0.88	20.49	0.6
Oneonta	90	43	66	7	110	2339	664	0	-0.84	22.91	1.49
Coastal											
Bridgehampton	87	46	69	4	133	2584	331	0	-0.84	19.54	-0.09
New York	91	53	74	5	173	3469	473	0.08	-0.74	21.07	0.29

1. *D*eparture *F*rom *N*ormal
2. 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,SEPTEMBER 22nd, 2002

	Temperature				Growing Degree Days *(Base 50)*			Precipitation (Inches)			
	High	*Low*	*Avg*	*DFN*[1]	*Week*	*Season*[2]	*DFN*	*Week*	*DFN*	*Season*	*DFN*
Hudson Valley											
Albany	81	49	68	8	125	2749	403	2.55	1.87	19.73	0.83
Glens Falls	80	45	65	8	110	2323	283	2.53	1.83	18.85	0.17
Poughkeepsie	80	50	67	6	120	2574	104	1.14	0.37	25.2	3.48
Mohawk Valley											
Utica	83	47	68	9	127	2478	344	1.07	0.04	27.64	5.45
Champlain Valley											
Plattsburg	80	43	64	7	101	2258	192	0.13	-0.56	19.62	1.32
St. Lawrence Valley											
Canton	83	45	66	10	115	2262	404	0.08	-0.81	20.13	0.56
Massena	83	44	65	9	109	2199	257	0.11	-0.7	20.22	2.35
Great Lakes											
Buffalo	85	53	70	10	140	2690	423	0.22	-0.56	16.88	-2.58
Colden	84	51	67	10	120	2208	370	1.26	0.16	16.68	-6.02
Niagara Falls	86	50	70	9	139	2658	387	0.51	-0.33	15.91	-3.11
Rochester	89	52	71	11	148	2841	645	0.42	-0.26	16.76	0.06
Watertown	84	45	67	10	122	2270	367	0.07	-0.68	15.56	-0.02
Central Lakes											
Dansville	84	50	68	9	131	2523	318	1.15	0.38	18.46	0.15
Geneva	86	52	69	9	133	2562	377	0.81	0.04	16.84	-1.25
Honeoye	86	49	68	8	130	2427	133	1.01	0.3	19.43	1.54
Ithaca	83	46	67	9	119	2387	412	2.36	1.52	21.93	2.41
Penn Yan	86	54	70	11	146	2747	562	1.73	0.96	15.17	-2.92
Syracuse	88	52	71	11	147	2848	629	0.54	-0.37	21.65	1.09
Warsaw	82	51	65	9	107	2142	451	1.06	0.14	25.02	3.57
Western Plateau											
Alfred	84	45	65	8	106	2228	435	1.64	0.8	21.39	0.95
Elmira	85	49	68	10	130	2519	433	1.27	0.57	19.17	0.82
Franklinville	83	49	65	10	109	1976	445	5.37	4.46	28.24	6.6
Sinclairville	82	50	65	8	109	2219	490	0.83	-0.27	24.5	0.19
Eastern Plateau											
Binghamton	80	46	66	8	111	2419	401	1.09	0.32	20.59	1.17
Cobleskille	84	47	66	9	113	2331	453	1.42	0.55	20.79	-0.14
Morrisville	79	47	65	8	107	2098	311	2.99	2.06	25.58	4.63
Norwich	83	47	66	9	115	2279	399	1.47	0.58	21.96	1.18
Oneonta	83	48	67	11	118	2457	734	1.85	1.01	24.76	2.5
Coastal											
Bridgehampton	80	52	68	5	125	2709	364	1.23	0.45	20.77	0.36
New York	83	64	74	7	167	3636	519	0.94	0.17	22.01	0.46

1. *D*eparture *F*rom *N*ormal
2. 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, SEPTEMBER 29th, 2002

	Temperature				Growing Degree Days *(Base 50)*			Precipitation (Inches)			
	High	*Low*	*Avg*	*DFN*[1]	*Week*	*Season*[2]	*DFN*	*Week*	*DFN*	*Season*	*DFN*
Hudson Valley											
Albany	81	42	61	4	80	2829	427	0.77	0.14	20.5	0.97
Glens Falls	71	34	58	3	54	2377	294	2.42	1.73	21.27	1.9
Poughkeepsie	81	44	61	3	76	2650	117	1.81	1.06	27.01	4.54
Mohawk Valley											
Utica	74	37	57	1	51	2529	344	2.82	1.87	30.46	7.32
Champlain Valley											
Plattsburg	72	33	57	2	53	2311	201	2.65	2.02	22.27	3.34
St. Lawrence Valley											
Canton	80	34	56	2	47	2309	412	2.24	1.41	22.37	1.97
Massena	79	35	56	2	44	2243	263	1.82	1.07	22.04	3.42
Great Lakes											
Buffalo	77	45	60	2	71	2761	432	1.74	1	18.62	-1.58
Colden	76	42	57	2	49	2257	373	1.83	0.81	18.51	-5.21
Niagara Falls	78	43	59	1	66	2724	391	1.55	0.79	17.46	-2.32
Rochester	81	44	61	3	77	2918	659	1.9	1.27	18.66	1.33
Watertown	79	34	56	1	46	2316	368	2.4	1.7	17.96	1.68
Central Lakes											
Dansville	80	40	58	0	55	2578	313	1.62	0.89	20.08	1.04
Geneva	79	42	59	2	65	2627	384	1.75	1.05	18.59	-0.2
Honeoye	80	37	57	-3	51	2478	118	1.77	1.07	21.2	2.61
Ithaca	76	37	57	2	53	2440	415	2.79	2.01	24.72	4.42
Penn Yan	80	45	60	3	72	2819	576	1.66	0.96	16.83	-1.96
Syracuse	81	42	61	4	75	2923	643	2.22	1.38	23.87	2.47
Warsaw	73	42	55	1	36	2178	449	1.82	0.95	26.84	4.52
Western Plateau											
Alfred	75	35	55	-2	34	2259	421	1.6	0.79	22.99	1.74
Elmira	79	38	59	3	61	2580	442	2.1	1.4	21.27	2.22
Franklinville	75	38	54	2	32	2008	442	1.72	0.81	29.96	7.41
Sinclairville	74	44	56	2	46	2265	493	2.3	1.26	26.8	1.45
Eastern Plateau											
Binghamton	69	36	56	1	46	2465	399	3.09	2.34	23.68	3.51
Cobleskille	72	36	57	2	48	2379	456	2.07	1.25	22.86	1.11
Morrisville	73	39	55	1	39	2137	309	3.5	2.6	29.08	7.23
Norwich	73	41	58	3	54	2333	409	3.02	2.19	24.98	3.37
Oneonta	76	42	58	5	58	2515	754	2.41	1.61	27.17	4.11
Coastal											
Bridgehampton	82	51	67	7	118	2827	405	3.21	2.44	23.98	2.8
New York	82	56	68	4	126	3762	541	2.25	1.51	24.26	1.97

1. *D*eparture *F*rom *N*ormal
2. 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 6th, 2002

	Temperature				Growing Degree Days *(Base 50)*			Precipitation (Inches)			
	High	*Low*	*Avg*	*DFN*[1]	*Week*	*Season*[2]	*DFN*	*Week*	*DFN*	*Season*	*DFN*
Hudson Valley											
Albany	82	39	63	8	90	2919	475	0.07	-0.56	20.57	0.41
Glens Falls	80	36	59	8	70	2447	333	0.28	-0.36	21.55	1.54
Poughkeepsie	82	43	62	7	87	2737	157	0.17	-0.53	27.18	4.01
Mohawk Valley											
Utica	81	39	63	10	93	2622	399	0.41	-0.42	30.87	6.9
Champlain Valley											
Plattsburg	81	36	59	7	68	2379	238	0.53	-0.06	22.8	3.28
St. Lawrence Valley											
Canton	79	35	59	8	65	2374	449	0.59	-0.18	22.96	1.79
Massena	79	33	59	8	71	2314	306	0.39	-0.28	22.43	3.14
Great Lakes											
Buffalo	81	45	65	10	109	2870	493	0.45	-0.25	19.07	-1.83
Colden	79	41	62	10	89	2346	427	0.69	-0.21	19.2	-5.42
Niagara Falls	80	40	65	10	109	2833	452	0.44	-0.23	17.9	-2.55
Rochester	84	44	67	12	121	3039	731	0.31	-0.25	18.97	1.08
Watertown	80	34	63	10	90	2406	424	0.49	-0.14	18.45	1.54
Central Lakes											
Dansville	89	40	64	9	97	2675	364	0.3	-0.36	20.38	0.68
Geneva	83	42	63	9	95	2722	435	0.31	-0.39	18.9	-0.59
Honeoye	82	37	64	8	98	2576	165	0.46	-0.23	21.66	2.38
Ithaca	82	39	63	10	91	2531	468	0.52	-0.25	25.24	4.17
Penn Yan	82	43	66	12	112	2931	644	0.12	-0.58	16.95	-2.54
Syracuse	84	44	66	12	115	3038	712	0.91	0.14	24.78	2.61
Warsaw	76	40	61	10	77	2255	498	1.04	0.24	27.88	4.76
Western Plateau											
Alfred	80	33	61	9	81	2340	469	0.84	0.1	23.83	1.84
Elmira	83	39	63	10	92	2672	495	0.94	0.29	22.21	2.51
Franklinville	78	40	61	11	79	2087	496	1.31	0.47	31.27	7.88
Sinclairville	77	41	62	10	86	2351	548	1.08	0.13	27.88	1.58
Eastern Plateau											
Binghamton	77	40	62	9	86	2551	449	0.71	0.02	24.39	3.53
Cobleskille	81	38	61	9	81	2460	505	0.25	-0.49	23.11	0.62
Morrisville	78	39	59	8	66	2203	345	1.11	0.29	30.19	7.52
Norwich	81	40	61	9	77	2410	455	0.37	-0.4	25.35	2.97
Oneonta	81	40	63	12	90	2605	816	0.36	-0.41	27.53	3.7
Coastal											
Bridgehampton	83	45	67	9	117	2944	461	0	-0.73	23.98	2.07
New York	87	57	71	10	151	3913	608	0.09	-0.61	24.35	1.36

1. *D*eparture *F*rom *N*ormal
2. 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 13th, 2002

	Temperature				Growing Degree Days *(Base 50)*			Precipitation (Inches)			
	High	*Low*	*Avg*	*DFN*[1]	*Week*	*Season*[2]	*DFN*	*Week*	*DFN*	*Season*	*DFN*
Hudson Valley											
Albany	66	36	55	4	40	2959	485	1.3	0.67	21.87	1.08
Glens Falls	64	29	53	4	27	2474	341	0.4	-0.23	21.95	1.31
Poughkeepsie	72	38	53	1	27	2764	151	4.3	3.63	31.48	7.64
Mohawk Valley											
Utica	67	38	54	3	32	2654	404	0.77	0.02	31.64	6.92
Champlain Valley											
Plattsburg	64	32	52	3	23	2402	241	0.06	-0.5	22.86	2.78
St. Lawrence Valley											
Canton	66	31	51	3	22	2396	452	0.18	-0.55	23.14	1.24
Massena	67	30	50	2	26	2340	314	0.03	-0.6	22.46	2.54
Great Lakes											
Buffalo	70	37	57	4	49	2919	508	0.09	-0.56	19.16	-2.39
Colden	66	33	52	2	25	2371	428	0.04	-0.8	19.24	-6.22
Niagara Falls	69	35	55	3	47	2880	463	0.07	-0.56	17.97	-3.11
Rochester	71	38	57	4	53	3092	750	0	-0.55	18.97	0.53
Watertown	68	32	55	5	45	2451	445	0.28	-0.33	18.73	1.21
Central Lakes											
Dansville	66	33	52	-2	25	2700	355	0.15	-0.46	20.53	0.22
Geneva	67	36	53	2	30	2752	434	0.17	-0.46	19.07	-1.05
Honeoye	69	31	54	0	36	2612	163	0.1	-0.53	21.76	1.85
Ithaca	65	34	53	3	28	2559	470	0.19	-0.58	25.43	3.59
Penn Yan	67	37	56	4	45	2976	658	0.26	-0.37	17.21	-2.91
Syracuse	71	37	57	5	55	3093	733	0.4	-0.32	25.18	2.29
Warsaw	65	32	50	2	20	2275	499	0	-0.77	27.88	3.99
Western Plateau											
Alfred	67	27	51	1	21	2361	466	0.23	-0.47	24.06	1.37
Elmira	66	33	54	4	37	2709	504	0.39	-0.24	22.6	2.27
Franklinville	67	31	51	3	20	2107	498	0.09	-0.75	31.36	7.13
Sinclairville	65	34	52	3	24	2375	551	0.02	-0.89	27.9	0.69
Eastern Plateau											
Binghamton	62	36	52	2	23	2574	448	0.61	-0.02	25	3.51
Cobleskille	65	33	51	1	14	2474	496	1.42	0.72	24.53	1.34
Morrisville	62	35	50	1	14	2217	340	0.8	0.03	30.99	7.55
Norwich	66	34	52	3	18	2428	453	1.18	0.47	26.53	3.44
Oneonta	66	35	53	5	28	2633	824	1.24	0.47	28.77	4.17
Coastal											
Bridgehampton	75	41	59	4	62	3006	477	2.72	2.02	26.7	4.09
New York	78	52	61	3	82	3995	624	4.06	3.43	28.41	4.79

1. *D*eparture *F*rom *N*ormal
2. Season accumulations are for April 1st to date

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