

Cornell University Cooperative Extension Eastern New York Commercial Horticulture

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The Produce Pages

A Newsletter for Vegetable, Small Fruit, Tree Fruit and Grape Growers in Eastern New York

Welcome to the ENYCHP Monthly Newsletter, "The Produce Pages"

We hope that you enjoyed receiving your Cornell Cooperative Extension Eastern New York Commercial Horticulture Program's seasonal updates and found them informative and useful (Weekly Vegetable Update, Tree Fruit News, Berry News and Veraison to Harvest). As part of our commitment to providing you with the most current and relevant information, this is the first issue of "The Produce Pages", our monthly newsletter that takes the place of the specific commodity newsletters you were getting. The seasonal commodity newsletters will begin again in the spring and "The Produce Pages" will end in the spring of 2014 and start again in late fall 2014.

In "The Produce Pages" you will find information on all aspects of horticulture including fruit, vegetables and grapes and articles on topics such as labor, marketing and lots of meeting announcements. Many of the articles will be written by ENYCHP educators, but we will also bring you information from other sources that may be interesting and useful to your farming operation.

The ENYCHP is working hard this winter to put together excellent educational programs such as fruit and vegetable schools, high tunnel workshops and much more. We hope that as the end of the year approaches and you receive your enrollment renewal packages, you will continue to support Cornell Cooperative Extension ENYCHP. Our program continues to grow with the anticipated hiring of a new Business Management and Production Economics educator that we hope to have on board soon. This is exciting news as there has not been specific programming for fruit and vegetable growers in eastern NY related to these topics.

For more information or if you have enrollment questions, please feel free to contact any of the educators listed on the inside cover of this newsletter (or on the left hand column of this page). We appreciate your support and look forward to serving you in the few remaining months of 2013 and what we hope will be an excellent 2014! *-ENYCHP Team*

Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties

Meet the Eastern New York Commercial Horticulture Program Staff

Vegetable Educators:



Chuck Bornt Phone: 518-859-6213 Email: cdb13@cornell.edu Weed & pest ID/monitoring, reduced tillage, tomatoes, peppers, eggplant, potatoes, sweet corn, GAPs Cornell Cooperative Extension offers support to fruit and vegetable growers throughout Eastern New York. We have assembled a team with industry specific expertise in business practices for efficient production and sustainable growth.



Crystal Stewart Phone: 518-775-0018 Email: cls263@cornell.edu Organic production, small farm production, beginning farmers, garlic and other alliums, cooperative marketing



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By Amy Ivy, ENYCHP

By now winter greens in tunnels are well underway. Depending on your scheduling plans they may be young seedlings, almost ready for their first harvest, or older plants in full production. At any stage it really pays to spend a few minutes every few days and take a look, and I mean a really close look, to see if any bugs are lurking. It is much easier to stop pest outbreaks if you can catch them at their earliest stages.

If you need reading glasses,

you'll definitely need them or something stronger to spot these pests. Look on the undersides of both the older and newer leaves, and down in the center where the newest leaves are emerging. The problem pests tend to be small and often green so they blend in well. Aphids are the most common and most growers are all too familiar with them.

I often spot their white shed skins before I notice the live bugs. The adults are large enough to see easily while the juveniles often crowd alongside a leaf vein. Aphids come in many colors and are most often seen in groups, which makes them a little easier to find.

Thrips are tiny and are most often down in the center where the new leaves emerge so I have to gently spread those tender leaves apart to get a good look. The nymphs are tiny orange cylinders and the adults

Look Closely!



Figure 1. Spinach seeding with damage from aphids and thrips. *Photo by Amy Ivy*

are similar in shape but darker and faster moving. I find thrips easiest to spot if I watch for a few seconds to see if anything is moving since motion is easier to detect than a stationary speck. Once I find one thrips on a plant I have more patience to keep searching there for a total count.

White flies can be a problem, especially if flowering plant plugs were brought in and grown on during the preceding season. The easiest way to find the adults is to gently brush the

plants and look for tiny bits of white to flit around. Their immature stage stays quiet on the

undersides of leaves and can be very tricky to find.

Yellow sticky cards will help you detect adult white flies as well as shore flies and fungus gnats, but they won't be of much use for finding thrips and most aphids.

> In mid October I found both thrips and aphids on young spinach and arugula in an unheated tunnel. The grower first noticed the stunted growth on his spinach (Figure 1).

It was easy to find the aphids on the backs of the leaves but it took a much closer inspection to find the real problem, thrips. Not every plant had them, but 7 out of 10 plants did, for an average of 1.6 thrips per plant.

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Figure 2. You have to get down very close to find thrips. *Photo by C. Hoepting.*

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Look Closely! continued from page 3

You really have get down close to find these little bugs. When the plants are still small you may find it easier to dig up the plant to bring it to your eye level for a close inspection and then replant it. Otherwise a kneeling pad and magnifying visor will be essential equipment for finding thrips at the earliest stages in your tunnel greens (Figure 2).

It's important to take the time to examine your seedlings carefully each week so you can catch any outbreaks in the earliest stages. This is especially true if you want to use biocontrol methods since they the most effective when pest populations are still low. Once a raging infestation develops it's very hard to stop.

While I was there I checked on the other crops in the tunnel. The arugula looked fine, but I figured it would be prudent to take a closer look. I started with the larger leaves and found nothing, but when I turned over the older leaves I found plenty of aphids (Figures 3 and 4). This crop had only a few thrips, an average of .4 per plant but again, it's always better to catch these outbreaks at their earliest stages.



Figure 3. Young arugula plant, aphids were only under the older leaves. *Photo by Amy Ivy*



Figure 4. Aphids cluster on the undersides of leaves. *Photo by Amy Lyy*

For more information on Judson's research projects visit <u>http://bit.ly/180u672</u>.

Control Options

Judson Reid, Vegetable Specialist with the Cornell Vegetable Program, has been researching bio-control options for pests of fall and winter greens in tunnels. Follow this link for one of his most recent reports: <u>http://bit.ly/180u672</u>. His research with Molt-X and Mycotrol have shown favorable results so far for control of aphids in cool tunnels.

Parasitoids are an option for control of aphids but they are not so practical in leafy green crops. The parasitized aphids remain stuck to the leaves. providing an unexpected addition to your salad mix. Predatory pests such as ladybugs and cucumeris (a predatory mite) would be better choices for leafy green crops. Save the parasitoids for crops where you harvest the fruit, such as tomatoes, cucumbers and peppers so the mummified aphids are less likely to be carried out with the harvest.

Specialty Crops Block Grant Fiscal Year 2013

By Maire Ullrich, ENYCHP

Federal Funds are awarded to New York through the New York State Department of Agriculture and Markets. The 2013/14 NY projects total \$1,009,549.88 for 12 projects. Those projects mostly fund Cornell and CCE to work on:

- Specialty crop retail & wholesale marketing project in Essex County
- Improving use of NYS produce in the SUNY system
- Expansion of production of New York mild onion project
- Increase the profitability of the green industry by improving nursery native tree production
- Continued support of the wine with new grape varieties
- Leek moth monitoring and development of control strategies

- Minimize loss of grapes due to crown gall pathogen
- Protect nursery crops, home landscapes and natural environment systems against Phytophthora
- Improve insect, disease and weed management by using a newly established high-density organic apple orchard
- Minimize the damage to Long Island fruit orchards by adopting area-wide mating disruption
- Increasing potato seed production through the installation of a new hydroponics system

More-complete descriptions of all projects are available at the following web address: http://www.news.cornell.edu/stories/2013/09/10-cornell-specialty-crops-projects-get-usda-funding

Garlic Post-Harvest Trial Results

By Crystal Stewart, ENYCHP

Post-harvest handling is a yearly challenge for growers in the Northeast. Often the success of the crop continues to be dependent on the weather even after it is out of the ground, with drying going well in dry years and poorly in rainy years. We set the goal of determining the optimal handling to dry garlic through three on-farm post-harvest trials in 2012 and three more in 2013. Through these trials we were able to determine that garlic can tolerate more light, heat, and pruning during the drying process than was previously demonstrated, and that we can create a more effective drying environment regardless of the weather using high tunnels.

Choosing post-harvest treatments

Treatments were chosen based on what growers throughout New York indicated worked well for them and through the advice of the Garlic Seed Foundation. The following options were chosen: drying occurred either in a high tunnel with shade cloth or in an open air structure such as a shed or barn; roots were either left on the bulb until drying was completed or cut off immediately (leaving the basal plate intact); tops were either left on until drying was completed or cut off at various heights during or directly after harvest, and garlic was washed immediately after harvest or was left unwashed. These treatments were combined in every possible way on each of the three farms.

Effects of treatments on bulb quality, disease incidence, drying time, and final weight

<u>High Tunnel vs. Open Air:</u> Across the trials garlic in high tunnels dried an average of three days faster than garlic in open air structures. Garlic dried in high tunnels had

slightly better wrapper quality (tighter, less discoloration) than garlic dried in open-air structures at one site during both years. Garlic dried in tunnels also had slightly lower disease incidence (*Aspergillus, Embellisia* and *Botrytis*), though disease was

Table 1: Treatments and average weights
aggregated from three trial sites, each with
three replications per treatment.

Treatment	Average weight/head	Count	
Cut at 6"	0.113lbs	1036	
Uncut	0.130lbs	972	

not severe in any site or treatment in either year. No garlic treatments showed damage from being dried in the high tunnel.

The environment in the high tunnel needs to be carefully managed in order to be most effective. Technically temperatures can reach 121° F before waxy breakdown, the physiological disorder resulting from high temperatures, is initiated. However, to account for uneven heating in the high tunnel and possible delays in dropping temperatures through ventilation, the grower cooperators



Image 1: Garlic dried in a high tunnel as part of the postharvest trial. Fans help keep air temperature and humidity uniform in the tunnel even when it is closed. *Image: Crystal Stewart*

agreed that 110° F was a safer limit. Thermometers to monitor the temperature were located at the same height as the garlic.

Limiting temperature is just one aspect management. Maintaining air movement in the high tunnel through the use of internal fans helps even out the temperature and humidity, particularly if drying racks are stacked (Image 1). The grower cooperators also agreed running dehumidifiers at night and whenever the high tunnel was closed was beneficial, as it removed up to 20 gallons of water from the air during an eight-hour period and kept conditions closer to optimal. Without closing the tunnel and running dehumidifiers the humidity in the tunnel can reach up 100%, which pauses or reverses the drying process.

> <u>Roots trimmed vs. roots untrimmed:</u> No statistically significant differences were observed between these treatments in regards to bulb quality, weight, or disease incidence in either year. Root pruning is considerably more difficult and time consuming on wet roots than dry roots.

<u>Tops trimmed vs. tops untrimmed:</u> Trimming the tops mechanically in the field using a sickle-bar mower greatly increased the speed of harvest and reduced the space needed for drying. Top trimming did not have a significant effect on disease incidence in dried bulbs, but there were differences in bulb weight at two of the farms in year one, with un-cut bulbs being slightly heavier (Table 1). It was unclear if this difference was due to weight loss or to double bulbs, since the number of bulbs is greater in the

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Garlic Post-Harvest Trial Results, continued from page 5 treatments with lower weights. Because of this question, relatively uniformly sized, non-doubled bulbs were chosen for the samples during year two instead of taking every bulb from a plot, including doubles, as had been done in year one. In addition to this change, additional cutting lengths were also added to determine if leaving some stem would affect weight or disease incidence. During year two, the pruning length did not affect the dried weight of bulbs significantly (Table 2). Furthermore, there were no significant differences in disease incidence across any of the trimming treatments.

<u>Washed vs. unwashed</u>: Washed garlic initially had very clean, tight wrappers, but became more discolored than the unwashed garlic during the drying and curing process. Most discoloration could be removed by removing 1-3 wrapper leaves, but this extra step is time consuming. Disease incidence, particularly *Aspergillus* and *Embellisia*, was slightly higher in washed garlic. This treatment was discontinued after year one of the study because the returns from the process were deemed too low.

Discussion of results and next steps

These trials have demonstrated that it is possible to dry garlic quickly and effectively by creating a warm, dry environment. Garlic can be dried at 110° F without damage to the bulbs. Furthermore, one to two layers of shade cloth provides enough protection for bulbs to prevent damage from the sun.

These trials have also demonstrated that trimming the tops of the garlic while it is in the field rather than drying the whole plant intact does not increase disease issues or reduce bulb weight. This finding is particularly useful to growers who find that they have too much garlic for their drying area, as they can remove the tops without concern that the garlic will become unmarketable or lose value as a result.

 Table 2: Treatments, aggregated weights of treatments

 across replications, counts, and average weights per head

 from year two. Data was combined from all three sites.

Treatment	Weight/ treatment	Count	Average weight/head	
1.5 inch	23.7lbs	183	0.129lbs	
6 inch	22.7lbs	186	0.122lbs	
10 inch	24.4lbs	206	0.118lbs	
Uncut	39.4lbs	302	0.130lbs	

Notably, all of these trials were conducted in relatively dry years. We might expect that if the season had been wetter, differences between high tunnel and open-air drying systems would have increased rather than decreased. The worse the outside conditions for drying, the more important it becomes to be able to control the environment. High tunnels offer more significant opportunities for control than most barn systems.

Not every grower will be able to use a high tunnel system to dry garlic, or will want to cut the tops. These recommendations do not need to be followed exactly for success, but if a grower is struggling with disease and post-harvest breakdown, applying the principles of limiting humidity and increasing temperature while drying should prove beneficial, whether accomplished in a high tunnel, a hay mow, etc.

To follow-up on these studies, we would like to address growers' questions about the effects of these treatments on longer-term storage and on quality factors such as sulfur compound concentration, and would like to determine what the best environment is to store garlic for one, three, or 6 months.

If there are questions about how to apply these treatments to a specific post-harvest system, please contact Crystal at <u>cls263@cornell.edu</u> or 518-775-0018. This project was made possible through the support of Northeast SARE.

Soil Testing Reminder

It's that time of year and if you haven't had a recent soil test done on fields you plan to plant in 2014, it's best to get it done now. The recommended gap between tests is 3 years. Most importantly, you need to be sure your pH is on target for your crop to maximize production and decrease certain pest problems. Nutrient deficiencies not only decrease total yield they can also make a crop

look less desirable so what you do harvest is not salable.

Check out the <u>Dairy One website</u> to get testing bags/kits. Many Extension offices usually have a supply of kits but call ahead to be sure they have some in stock if you want to pick them up. Payment is due when you send the soil in for analysis.

http://www.dairyone.com/AgroOne/soiltesting/default.htm



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High Tunnel School

Getting the Most from Your High Tunnel – Summer Crops

Monday December 9 - Visitor's Interpretive Center, Paul Smiths College

OR

Friday December 13 - CCE Office, 24 Martin Rd, Voorheesville

(Same program and speakers, two locations and dates)

10:00 am - 3:00 pm Cost: \$25/person includes lunch

Speakers include Judson Reid, Vegetable Specialist with the Cornell Vegetable Program; Chuck Bornt, Laura McDermott and Amy Ivy, Specialists with the Eastern NY Commercial Horticulture Program; and eastern NY growers with experience using high tunnels. *DEC recertification credits have been applied for*.

The program is the same both days; choose the location and date most convenient. The cost of \$25 per person includes lunch and resource materials. This program is funded in part by a Specialty Crops Research Initiative block grant through the NYS Dept of Ag & Markets.

Registration is due by Wednesday, December 4th. For more information contact Amy Ivy at <u>adi2@cornell.edu</u> or 518-570-5991. To register contact CCE in Clinton County at 518-561-7450 or email <u>clinton@cornell.edu</u> or visit <u>http://cce.cornell.edu/Clinton</u> and click on event registrations to register for this High Tunnel School online.

CCE provides equal program and employment opportunities.

Governor Cuomo Signs Bill to Allow Licenses for NY Farm Cideries Bill Delivers on Promise Made at the NYS Wine, Beer, and Spirits Summit Signing Kicks off Cider Week NY, Sponsored by Taste NY, Albany, NY

Governor's Press Office, October 17, 2013, edited by Maire Ulllrich, ENYCHP

Governor Andrew M. Cuomo today signed the Farm Cideries bill that establishes a new license for farm cideries similar to the licenses already available to farm wineries, breweries and distilleries. This legislation follows through on promises made to farm cideries after the NYS Wine, Beer and Spirits Summit. Today's signing also coincides with the beginning of CiderWeek NY, featuring 9 days of events throughout New York City and the Hudson Valley, aimed at promoting New York's ciders. For more information on CiderWeek NY, from October 18 to 27, visit http://www.ciderweekny.com/.

The Farm Cideries bill authorizes the establishment and licensure of farm cideries for the manufacture and sale of cider made from crops grown in New York State and would exclude licensed farm cideries from the sales tax information return filing requirements. In order to obtain a farm cidery license, the hard cider must be made exclusively from apples grown in New York State and no more than 150,000 gallons may be produced annually. Farm cideries will be allowed to offer tastings of and sell not only cider, but also beer, wine, and spirits made from New York products. In addition, because farm cideries may also sell products such as mustards, sauces, jams, jellies, souvenirs, artwork, crafts and other gift items, these businesses, much like farm wineries, will become destination locations that will promote tourism within their communities. Also, the need for apples in the manufacture of New York State labeled cider would create a sustained demand for products from New York's farmers.

The Wine, Beer and Spirits Summit, hosted by Governor Cuomo identified an increased interest in the production of hard cider in New York State. New York has already established licenses for farm producers of wine, spirits and beer, but not for cider. This bill provides small craft cider makers with additional opportunities to highlight and market their products. The provisions of the new bill are modeled on similar provisions for farm breweries enacted in 2012. The farm winery and farm distillery licensing programs have been an integral part of promoting these industries in New York.

The law will take effect in 90 days.

Commissioner Reminds Farmers to Sell to Licensed Dealers: Agricultural Producers Security Law Protects Farmers from Nonpayment

Press Release July 12, 2013 NYS Dept of Ag and Markets

New York State Agriculture Commissioner Darrel J. Aubertine today reminded farmers to only sell to licensed farm product dealers this growing season. Article 20 of the New York State Agriculture and Markets Law, more commonly known as the Agricultural Producers Security Law, requires dealers to be licensed and contribute to a security fund in order to offer financial protection to farmers in the event of a defaulted payment.

Farm product dealers are required to be licensed with the Department of Agriculture and Markets. Dealers' licenses expire on April 30 of each year and must be renewed for the license year beginning May 1. The Department maintains a current list of licensed dealers on its <u>website</u> and will provide a hard copy upon request.

Article 20 of the New York State Agriculture and Markets Law provides financial protection for farmers against nonpayment for their products sold to licensed dealers. This financial protection consists of security in the form of a bond or letter of credit furnished by the dealer, and supplemental financial coverage from the Agricultural Producers Security Fund, which is funded by licensed dealers. In order to preserve a producer's eligibility for the financial protections available under the Agricultural Producers Security Law, producers must:

- 1. Sell only to licensed dealers. Only sales to licensed dealers are covered under Article 20. The dealer must be licensed at the time of the transaction.
- 2. Ensure that the sale of farm products between the producer and dealer, for which a claim is made, has occurred within 120 days from the earliest unpaid

transaction date at the time the claim is filed. Unpaid transactions that occur after the 120 day period will not be eligible.

3. Claims of nonpayment must be filed with the Department no later than 365 days after the sale and delivery of the farm products. In the event the Department has issued a notice to file claims, claims must be submitted by the date specified in the published notice.

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

For up-to-date information about the law, a copy of the brochure or a list of licensed dealers, please call the Department at 800-564-4501.

What's MarketMaker?

MarketMaker is a free web-based mapping resource used by thousands of food producers, processors, distributors, food retailers, and consumers. MarketMaker helps farmers and other food relted enterprises connect with other members of the food supply chain and helps consumers find healthier, fresher and more flavorful locally grown food. MarketMaker also educates users on food marketing and valueadded agriculture marketing topics and regulations.

http://nymarketmaker.cornell.edu



Cornell Hops Conference and NeHA Annual Meeting

Saturday, December 7, 2013 8:00 am -5:00 pm Morrisville State College



This is a great networking opportunity to meet with brewers, educators, growers, and prospective growers. Registration includes lunch and trade show (25 vendors). Please note seating is limited. Register at the following link before November 25: <u>https://reg.cce.cornell.edu/CornellHopsConference_225</u>.

The conference will contain one full day session of hop related topics and there will be two additional separate tracks: (1) Growing hops for beginners & (2) Brewing.

Topics

Hop Harvesters For East Coast Hops
Using Cover Crops As An IPM Tool In Hops
(1) What It Takes To Build 1 Acre Hopyard
(2) Solar Heating In Sustainable Brewing
Determining Optimum Harvest Time
(2) Farm Brewery And Cidery Licenses
Managing Diseases In The Hopyard
(2) Cost of Setting Up A Small Scale Brewery
Effective Spraying
How Brewers Select Their Hops/(2) Quality Control
Hops Fertility, Petiole Analysis
Morrisville's New Equipment
(1) Overview of Hop Pests and IPM
Greenhouse to Field, Giving Rhizomes A Jumpstart

Speakers

Chris Callahan, University of Vermont Lillian Calderwood, University of Vermont Dave Combs, Geneva Experiment Station Jim Cranston, Suntrac Solar Corporation Dr. Heather Darby, University of Vermont Sam Filler, Empire State Development Dr. David Gent, USDA Corvallis Oregon Randy Lacey, Hopshire Farm Brewery Dr. Andrew Landers, Geneva Experiment Station Rich Michaels, F.X. Matt's Brewery Steve Miller, Cornell Cooperative Extension Dr. Chris Nyberg, Morrisville State College Tim Weigle, Cornell Grape IPM, Clerel Lab Jared & Dustin Wood, Muddy River Hops Dr. Heather Darby & Tim Weigle

Events & Pricing

- Registration Fee For NeHA Members \$75
- Registration Fee Non-Members \$85
- Friday Beer Pairing Dinner \$45 (only 100 seats available)
- Saturday Post Conference Happy Hour \$15
- Saturday Beer Pairing Dinner \$45 (only 50 seats available)

For more information about the conference contact:

Steve Miller 315-684-3001 x127 or sgm6@cornell.edu

Alycia Schick 315-684-3001 x108 or ans74@cornell.edu



Hotel Accommodations: There are rooms blocked at Colgate Inn (315-824-2300) & Wendt University Inn (315-824-4400) under "Hops Conference". To find more locations check <u>www.madisontourism.com/</u> and <u>www.oneidacountytourism.com</u>. Limited number of rooms.

Become a NeHA Member Today! NeHA Membership \$40 per farm. For more information visit <u>www.nehopalliance.org</u>.

This event is brought to you by USDA Agriculture/NYS Department of Agriculture and Markets Specialty Crop Block Grant, and NYS Farm Viability Institute Grant

VOLUME 1, ISSUE 1 Average Yields for Vegetable Crops Grown in New York State

By Stephen Reiners, Associate Professor in Horticultural Sciences, Cornell University

The figures in this table are based on information provided by New York Agricultural Statistics, CCE educators, faculty and processors. Where limited information was available from New York, sources from Michigan and New Jersey were consulted.

DEFINITIONS

<u>Low Yields</u> = lowest yields that experienced farmers should expect in adverse years. Likely not profitable at these yields.

<u>Average Yields</u> = average yields for experienced farmers growing the crop under good growing conditions. Likely profitable at these yields.

<u>Excellent Yields</u> = attained by careful, experienced farmers under extremely optimal conditions. Very profitable at these yields.

TABLE 1. Average yields of processingvegetables grown in New York State

	PROCESSING VEGETABLES			
CROP	LOW AVERAGE (T/A) (T/A)		EXCELLENT (T/A)	
Beans, snap	1.75	3.5	>4.0	
Beets, red	9.0	14.0	18.0	
Cabbage, kraut	12.0	28.0	40.0	
Carrots, slice	15.0	20.0	25.0	
Carrots, dice	15.0	22.5	30.0	
Peas	1.0	2.0	3.0	
Sweet Corn	3.0	6.0	7.5	

TABLE 1A. Average yields per acre of vegetables grown in New York State

CROP	LOW (cwt)	AVERAGE (cwt)	EXCELLENT (cwt)	CROP	LOW (cwt)	AVERAGE (cwt)	EXCELLENT (cwt)
Asparagus	15	20	25	Lettuce, romaine	280	360	440
Beans, snap, fresh market	40	60	80	Muskmelon	80	150	200
Beets, red topped, fresh market	200	250	300	Okra	40	80	100
Broccoli	50	80	120	Onions, dry	200	350	500
Brussels Sprouts	80	100	120	Onions, green	160	180	200
Cabbage, fresh market	250	350	450	Pak Choi	80	100	120
Cabbage, Chinese	140	180	200	Parsley	120	160	200
Carrot, FM	200	260	300	Parsnip	160	200	260
Cauliflower	80	130	180	Peas, snap	30	60	80
Celery	400	500	600	Peas, in pod	60	90	140
Corn, sweet (fresh market)	60	110	160	Pepper, green bell	80	200	260
Cucumber, slicing	120	200	260	Pepper, banana	100	140	180
Cucumber, pickling, hand harvest	140	220	280	Pepper, cherry	80	100	120
Cucumber, pickling, machine harvest	80	100	160	Pepper, jalapeno	80	120	140
Eggplant	160	200	240	Potato	225	300	400
Endive, Escarole	200	300	400	Pumpkin	200 (10 T/A)	300 (15 T/A)	400 (20 T/A)
Greens (mustard, turnip, collards, kale)	100	120	150	Radish	40	60	100
Kohlrabi	140	200	300	Spinach	40	80	120
Leek	140	160	180	Squash, summer	100	175	250
Lettuce, head	150	250	350	Squash, winter	200	300	400
Lettuce, Bibb, Boston	100	160	200	Tomato, fresh market	100	200	300
Lettuce, leaf	200	240	300	Watermelon	120	200	240

By Maire Ullrich, ENYCHP

As your seeds arrive, we recommend that you send samples to the NYS Seed Testing Lab (NYSSTL) to ensure that you're about to plant is of good quality, especially if it is carry-over seed..

Tips:

- Call with any questions or to see how many seeds of each type of plant will be needed but generally, it requires 200 seeds. The number is: 315-787-2242
- Collect seeds and place in envelope (not anything plastic where seeds could sweat). Use a box or pad well to avoid crushing from machines used in post office.
- Attach necessary information:
 - Your contact info, name, address, phone, note if billing information is different
 - o Type & Variety
 - o Lot Number
 - Seed Treatment: Note Samples submitted for testing must be labeled if they are treated with any seed treatment. This information is essential for both handling and testing procedures. Testing procedures for some crops are determined by the seed treatment present.
 - o Type of test or analysis desired
 - Routine tests: Routine tests for seed quality include: Germination, Moisture, Purity and Vigor. In addition to providing labeling information and germination potential, these tests can also be used for diagnostic testing to determine adulterated samples, causes of seed deterioration and fungicide efficacy. For more information about the tests available, or for a current price schedule, please contact the laboratory.

- Specialized tests: Tests have been developed by the NYSSTL for the New York State growers and processors to provide more information about a seed lot than is provided by the Germination test alone. Germination tests provide information for use in labeling, comparing seed lots, and for making carryover decisions. They **do not** predict field performance. For a more accurate assessment of seed quality the following tests are available: The Breakdown Test for Beans, the Sand Test for Beets, the Necrosis Test for Lettuce.
- Special instructions for testing, reporting or billing.
- Mail Sample to: NYS Seed Testing Laboratory, Dept. Horticultural Sciences-Sturtevant Hall, NYS Agricultural Experiment Station, 630 W. North Street, Geneva, NY 14456
- Two factors determine the amount of time required for completing a seed analysis or test. One factor is the number of other samples being received by the laboratory at the time the sample arrives. The second factor is the time required for that crop kind. Some crop kinds require a week while others require a month or more for completion. If you are in a rush, consider expedited mail and contact the lab about rush services. There are additional fees for rush services.
- Results will be sent by mail as soon as tests are completed. They also may be faxed upon request. Results may be reported by phone at customer expense only. If an 800 number is supplied, or

instructions given for calling collect, results may also be phoned.



Source: http://www.nysaes.cornell.edu/cals/nysaes/seed-lab/

Handy Farm Bureau Publication

Farmer's Guide to Truck & Farm Implement Laws & Regulations, 3rd ed.

- Learn how the Department of Transportation (DOT) regulations affect you
- Discover the vehicle equipment standards that apply to your vehicles
- Learn the specific requirements of the vehicle equipment regulations in New York State

\$20.00 per copy for members and \$40.00 per copy for non-members

Go to: http://nyfb.org/legal/subpage.cfm?ID=54 or call Farm Bureau at 800-342-4143

VOLUME I, ISSUE I

The Cooperative Extension Association of Rensselaer County Agriculture and Life Sciences Building 61 State Street, Troy, NY 12180 Non-Profit U.S. Postage Paid Albany, NY Permit #937

UPCOMING EVENTS

Dec. 4, 9:30am-3pm Upstate NY Potato Advisory Meeting, CCE Ontario Co., Canandaigua. Annual roundtable discussion on concerns of fresh market and processing potato growers and processors, reports on research, and agency updates. (Note: Walter DeJong, Cornell, has scheduled his Potato Breeding Line Show & Tell for Wednesday, November 6, at Cornell, Ithaca.) Cost - \$10. Pre-reg. by 11/29. Contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

Dec./Jan/Feb Various dates Farm Food Safety Trainings with GAPs, 2-Day Workshops, 8:30am-3pm both days, four locations/sessions. Dates and Locations: Dec. 10-11, Fire Training Ctr., Batavia; Dec. 18-19, CCE Wayne Co., Newark; Jan. 6-7, CCE Ontario Co., Canandaigua; Feb. 27-28, location TBA, Bath, NY. Training for farmers who are being required by buyers to provide 3rd-party verification of their food safety practices and for farmers thinking about moving in this direction. Day 1: what GAPs is, how it works, what it means for your farm. Day 2 *(laptop required)*: writing a food safety plan as required for audit certification. More info. at http://www.gaps.cornell.edu/eventscalendar.html or contact: Craig Kahlke cist37@cornell.edu or 585-735-5448.

Dec. 5, 9am-2:30pm Annual Mohawk Valley Produce Auction Growers' Meeting, Canajoharie Fire House, 75 Erie Blvd, Canajoharie NY 13317. All growers are welcomed to attend this educational update. 2.5 DEC credits have been awarded in categories 1a, 10, and 23. Topics include a season-long pest and disease update, organic fertility management, corn pest update, growing giant onions, strawberry fertility, and local variety trial updates. Lunch is available for \$10. Please pre-register so we have an accurate lunch count by visiting our website (cdvsfp.cce.cornell.edu) or by calling Marcie at 518-272-9524 by Dec. 3.

Dec. 7 Cornell Hops Conference and NeHA Annual Meeting See page 9 for details.

Dec. 9 and 13 High Tunnel School - Summer Crops and Tunnel Basics, Paul Smith's and Voorheesville. See page 7.

Dec. 17-19 New England Vegetable & Fruit Conference, Manchester, NH. Over 25 educational sessions covering major vegetable, berry and tree fruit crops plus various special topics. A Farmer to Farmer meeting after each morning and afternoon session will bring speakers and farmers together for informal, in-depth discussion on certain issues. Also an extensive Trade Show with over 100 exhibitors. More info./registration at <u>http://www.newenglandvfc.org</u> or call Mark Hutton at 207-933-2100.

Jan. 21-23, 2014 Empire State Producers Expo and Trade Show. This show combines the major fruit, flower, vegetable, and direct marketing associations of NYS for a comprehensive trade show and educational conference for fruit and vegetable growers. Informative speakers, exhibitors with new products, and friends to socialize with. For more info/registration/lodging go to <u>http://</u>nysyga.org/expo/information/ or call 315-986-9320.

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use. No endorsement of any product is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension. *CCE provides equal program and employment opportunities.*

THE PRODUCE PAGES