January 2022

The Produce Pages

Serving the fruit and vegetable growers of Eastern New York

Feature Story

Hick's Orchard
Leveraging Social Media to Help Fulfill Their Mission

Laura McDermott, CCE ENYCHP

Hick's Orchard is located in Granville, NY just a few miles from the Vermont border. The slate industry may have first put this little village on the map, but Hick's Orchard is what many people think of when they hear Granville. The orchard opened their gates to U-Pick in 1905 and is recognized as the oldest U-Pick farm in New York State. In its 117 years of operation, the 350-acre farm has been owned and operated by just two families. The Wilson family currently owns Hicks Orchard and Dan Wilson is the 2nd generation of the Wilson family to work towards the farm's mission, 'Grow Food to Build Community'.

Most farm stores lean on the adage of location, location, location. In the case of Hick's Orchard, the location is important – but not for the purpose of convenience. This business necessarily welcomes community from a distance. The population of Glens Falls, NY and Rutland, VT are both more than 25 miles away, and Albany is a 50-mile drive. Travel to Granville provides a picturesque, traffic-free escape with a bucolic orchard retreat as the reward. This model has proved successful for over a century, but the business's future success may lie more in the strategy of continuous evolution.

The farm stand was initiated by Dan's parents in 1975. The first iteration occupied the old packing barn, and has since morphed into the current,

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Cornell Cooperative Extension
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The Produce Pages

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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, Putnam, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties.

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vibrant year-round farm store. In the mid-90's a bakery business was attempted, but after a few years that building was converted to much needed, large public bathrooms. Slyboro Cider, the hard cider business complete with tasting room was started in 2007, and has gained a devoted audience beyond the traditional U-Pick customer.

Haunted Hayrides and haunted barns have given way to smaller events that don't rely as heavily on overstretched harvest season staff. Dan has worked to promote U-pick cherries and blueberries during the summer, and other crops are constantly being considered. When the pandemic reminded customers of the value of local food and outdoor activities, it was apparent that more could be done beyond apple season. To keep good staff fully employed and even out revenue, some changes were needed.

For example, while their mission 'Grow Food to Build Community' has been a practice for a very long time, the actual statement bubbled up during a planning retreat in January 2021. Rick Andrews Improv was hired to help encourage creative, '*Yes and…*' thinking by farm employees alongside the newly hired business development manager, David Garvoille. David's background is in education, fundraising and event management – a perfect mix of skills given the challenges of direct farm marketing.

Social media, for example is increasingly important to reach customers. A customer survey was done in January of 2021 – the initial email survey yielded single digit responses, but Facebook feedback was over 500 responses – some of which were highly detailed. A big take-away was how much a trip to Hick's Orchard has become a part of family tradition. 50% of customers that responded to the survey have been visiting annually for 20 years, and many have been coming for more than 3 decades. The Wilsons learned that Hick's Orchard is a brand.

How to keep that brand fresh? Small, unique events that focus on the community as much as the orchard is the current emphasis. Dave and Dan are trying to encourage year-round consumer interest, make better use of available resources and utilize current staff wisely. This requires flexibility, trust and a relatively high degree of risk tolerance. A few examples of events include a music concert series, snow-shoeing or X-country skiing followed by a winter campfire, art shows in the cidery, a Christmas craft fair for children and a year-long apple-a-day challenge. All of these and more are fueled by a social media touch that is engaging and persistent, but not overwhelming. The emphasis in outreach is as much on elevating the relationship with customers as it is promoting the products.

And what of labor recruitment in this economy? Still very difficult given the rural location, but the farm uses creative outreach to attract local talent. Each month, a 'Good Apple Award' complete with press coverage and a small prize is given by the farm to a teacher-nominated high school sophomore. This effort helps orchard leadership to meet high-quality students that might value being a member of the Hick's Orchard team. Several great student employees have been recruited from this effort and it makes wonderful fodder for social media!

Are there challenges with non-stop business promotion? Definitely! Leadership needs to find time to measure financial success of the ventures and balance it with the toll it may take on staff. Staff need to be constantly trained – according to Dave, "Nothing in the donut kitchen is like McDonalds" which is a true statement for the entire farm. Social media offers its own unique challenge of trying to promote two very different businesses – the orchard and the cidery - to the general public. Locally produced farmstead hard cider is alcohol – and cross promotion to families with young children and adults over 21 on social media platforms is both not allowed by Facebook and others and is a poor marketing strategy.

Hick's Orchard succeeds in growing great fruit, crafting wonderful, award-winning cider and baking tasty donuts while using 'high touch marketing' and social media to elevate their relationship with customers and fulfill their mission – *Grow Food to Build Community*.

Effect of NY Ag Overtime Laws on Production Costs and Competitiveness: A Report to the New York Department of Agriculture and Markets

Christopher A. Wolf, Richard Stup, and Jason Karszes

The Farm Laborer Fair Labor Practices Act (FLFLPA) regulating New York farm employers went into effect on January 1, 2020. Under the FLFLPA, overtime and day of rest rules were put in place for most non-supervisory, non-family farm employees. This meant that the overtime threshold for hired employees in New York agriculture now begins at 60 hours. In addition, the minimum wage for upstate New York continues to increase. The New York Farm Labor Wage Board decided in late 2020 to keep the threshold at 60 hours for 2021 with the intention to revisit the policy with more data and analysis. The Dyson School at Cornell recently conducted a research project to examines the economic effects of New York overtime laws on farms in 2020 as well as assesses potential effects of lowering the limit. The full report is available at EB2021-06_Public.pdf | Powered by Box

Results for Fruit and Vegetable Farms in the Study

- Fruit farm total wage expenses increased 6.8% in 2020 relative to 2019
- Vegetable farm total wage expenses increased 10.1% in 2020 compared to 2019

From the interviews of fruit and vegetable farms, the biggest challenge on many operations in 2020 was the required day of rest which necessitated tighter controls of crews and activities. The most common response, 11 of the 20 respondents, was to tighten up management over labor use and allocation to focus on most profitable tasks and crops. Farms mentions the use of time tracking software, alternating work crews and reexamining productivity expectations.

Seven farms described switching to less labor-intensive crops. One example was to plant soybeans which are a machine-harvested crop rather than labor intensive vegetables which had been planted previously. Most reported planting fewer acres of high labor, lower return crops like summer squash and cucumbers. Other farms discussed shifting their production mix to higher value varieties and dropping lower value/cost varieties.

Six farms (30%) hired additional employees to keep the overtime expense down by spreading the work hours each week to more employees. Both H-2A and local workers were hired. Many farms discussed the desire to hire more employees but an inability to find workers. Thirty percent also responded that they invested in machinery and equipment to improve labor productivity. These long-term investments included harvest platforms, sprayers, and auto steer technology.

One-quarter of respondents left at least some crop in the field that they would have harvested in past years. Economic theory advises this decision when the cost to harvest is greater than the expected revenue from the crop, this will happen more frequently with higher labor costs. The result is that increasing labor costs resulted in increased on-farm food waste.

One-quarter responded that they paid overtime as necessary. This is a short-term response but may not be sustainable in the longer-term as costs increase with wages. Twenty percent eliminated non-essential tasks while smaller numbers of respondents reduced wage rates or benefits to offset overtime costs or outsourced farm tasks.

Impact of lowering Overtime to 50 or 40 Hours

When asked about what changes they would make if overtime went to 50 or 40 hours, One-half (10 farms) responded that they would hire additional employees to reduce or eliminate overtime hours. But most also questioned their ability to do so given the current labor market. Unlike dairy farms, however, fruit and vegetable farms can utilize H-2A workers. Many farms indicated that they would likely seek to hire more H-2A workers. They also were concerned that if they capped weekly hours to control overtime costs, these H-2A workers might be less willing to accept positions. Several farms also expressed concerns about housing costs and housing availability for H2A workers.

The second most common response, from 35 percent of farms, was to continue to tighten control of employee hours. One-quarter also indicated they would invest in machinery and equipment to increase labor productivity. Twenty percent indicated that they would look to switch to enterprises that used less labor per unit or were of higher value. This means in some cases farms were looking to move away from fruit and vegetables towards row crops. Many also spoke about dropping unprofitable markets and focusing their efforts on the most profitable markets and crops.

Thirty percent (6 farms) would delay or cancel capital investment. One-quarter would downsize or exit the fruit and vegetable enterprises. Finally, ten percent indicated that they would look to relocate production outside of New York. After correcting for double counting across farms, 11 individual farms would consider at least one of relocate, delay, or downsize/exit.

Conclusion

A 40-hour threshold overtime would cause many farm managers to reconsider labor-intensive crops and enterprises in favor of crops and enterprises that are easily mechanized. Many farm respondents indicated that they would reconsider or halt further investments in New York agriculture and even seek to move future investments to other states if the overtime threshold were lowered. Further, many respondents indicated that they are currently pausing investments in their farm operations pending the resolution of uncertainty around the New York overtime threshold. Finally, if managers cap hours in response to lower overtime thresholds, the ability to attract H-2A workers is a concern.

You can find a full copy of the report at EB2021-06_Public.pdf | Powered by Box

Wage Board to Reconvene in January on Overtime

Elizabeth Higgins, CCE ENYCHP

On Wednesday, December 15, 2021, New York State Labor Commissioner Roberta Reardon announced that she will reconvene a wage board to hold virtual public hearings to hear testimony to consider the existing overtime work threshold for farm laborers and the extent to which the overtime work threshold may be lowered in New York State.

Testimony will be heard from farm laborers, agricultural employers, academic experts, and elected officials, among others. All attendees are encouraged to preregister by using the registration button below. Speakers will be scheduled on a first-come, first served-basis, and three minutes will be allotted to each speaker. Links to the virtual hearings will be posted the Friday before each hearing. The meeting schedule is as follows:

2022 HEARINGS
Tuesday, 1/4/22, 3:30pm
Tuesday, 1/18/21, 5:00pm
Thursday, 1/20/21, 5:00pm

REGISTER TO TESTIFY: https://forms.ny.gov/s3/Farm-Laborers-Wage-Hearing

Are Persistent Biocontrol Nematodes (Entomopathogenic) a Fit for Your Organic Farm?

Elson Shields, Teresa Rusinek, and Tony Tests, Cornell University

Organic growers looking for a way to reduce damage to crops from soil-based insects may want to consider entomopathogenic nematodes. Strains of biocontrol nematodes adapted to NY growing conditions with their persistent genes intact to persist across growing seasons (and winter) are available in NY and can be utilized as an integrated tool, along with good cultural practices to suppress the soil insect populations below economic levels throughout the growing season.

What are they?

Nematodes are microscopic round worms in the soil and are broken down into three different types. 1) Plant parasitic, 2) Insect parasitic and 3) free living (on organic matter). Insect parasitic nematodes only attack insects in the soil, they do not feed on plants and are known as entomopathogenic nematodes (EPN) or biocontrol nematodes. The infective stage of the EPN (called the Infective Juvenile or IJ) moves about in the soil in search of insect hosts, finding the insect using CO_2 gradients and other chemical attractants. When an insect host is located, the IJ enters the insect through a breathing opening called a spiracle and penetrates the insect body cavity. Once inside, the nematode releases a bacteria which kills the insect. The nematodes then molt to adults and produce offspring on the nutrition provided by the dead insect. When the insect resources are consumed, a new set of IJs are released into the soil to search additional insect hosts. An average sized insect larvae will produce between 100,000 and 200,000 new IJs.

What do they attack?

Biocontrol nematodes or entomopathogenic nematodes will attack most insects living in the soil. Some insect species have evolved defenses against nematodes and are difficult for the nematodes to kill. In general, the weevil larvae (black vine, strawberry root, carrot weevil) are easily killed by EPNs. Lepidoptera larvae (cutworms, sod worms, armyworms) are also easily killed by EPNs. Fly larvae (maggots) such as cabbage maggot, seed corn maggot, and onion maggot can be killed but require more nematodes to attack them before they die. Native white grub species (multiyear lifecycle) are very susceptible to attack by EPNs, but invasive annual white grubs (Japanese beetle, Asiatic Garden beetle, Chafers) are much more difficult to control with EPNs.

When applying persistent native nematodes, the number of nematodes applied are significantly less than the recommended rate for commercially available nematodes (41 million nematodes per acre vs 1 billion nematodes per acre). Persistent nematodes become part of the soil fauna and increase in number by recycling in available hosts. Often, it takes until the second growing season for full

Diakon radish sampled from EPN treated portion of field have significantly less insect damage.

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nematode activity by persistent strains. This delay in full activity is a result of the nematode persistence across growing seasons. The nematodes applied are composed of a genetic array of "time of activation" known as "phased infectivity" and it takes several months for full activation of the nematodes. These genetic traits allow the persistent biocontrol nematodes to persist in the soil for many years while suppressing pest insects from a single inoculation. In contrast, the commercial strains available from retailers are 100% infective at application and have lost their ability to persist across unfavorable conditions, requiring careful application timing and annual applications.

The expected level of insect control from persistent native nematodes is influenced by the intensity of the pest invasion, soil moisture conditions and the soil temperature during the timing of insect attack. For example, black vine weevil larvae start attacking strawberry roots when soil temperatures warm to 45 ^{0}F. NY persistent nematodes become active between 45-50 ^{0}F but are most effective when soil temperatures are at least 60 ^{0}F. As a result, spring feeding by BVW larvae often gets ahead of the control by biocontrol nematodes. However, when BVW eggs first hatch in late summer-early fall, the soil temperatures are above 60 ^{0}F and the biocontrol nematodes are very effective against the young larvae before the soils cool for winter. Therefore, the strategy for the BVW pest control is to establish persistent biocontrol nematodes in mid-late summer before damage occurs and allow the nematodes to reduce the BVW larval population before winter, resulting in less spring cold soil damage. When the soil warms, the presence of persistent biocontrol nematodes in the soil profile will then attack the remaining large BVW larvae. Research has shown that it takes two growing seasons for persistent biocontrol nematodes to bring a BVW outbreak under control when the application of biocontrol nematodes is delayed until serious plant damage is observed. In contrast, if the grower knows BVW is present on the farm, a nematode application before economic damage is observed, prevents economic damage by attacking the sub-economic BVW larval population.

How are persistent biocontrol nematodes best used to manage soil insect pests?

Persistent biocontrol nematodes are best utilized as an integrated tool with good cultural practices, not to "clean up" a pest problem after poor management. Persistent biocontrol nematodes require a single application to inoculate the soil profile and work throughout the growing season to suppress soil insects as long as the soil temperature is above 50 ^{0}F. Frequently, persistent biocontrol nematodes suppress the soil insect populations below economic levels throughout the growing season.

Does the soil type influence the species of biocontrol nematode applied?

NY research data indicates a mix of biocontrol nematode species gives better control of soil insects than a single species alone. Each nematode species has a preferred section of the soil profile where it is the most effective and mixing species provides better protection across the soil profile occupied by soil insects. For example, *Steinernema carpocapsae* prefers the top 2-3" of the soil profile and becomes the dominate species in this region. If *S. carpocapsae* is the only nematode used, insect larvae below the 2" level escape attack from *S. carpocapsae*. A second nematode species which prefers the low portions of the soil profile complements the presence of *S. carpocapsae* and gives more complete control of soil insects located below 2". In the lighter soils, the top 2" often become too dry for a biocontrol nematode to move and attack insect larvae. In these soils, a nematode species mix which include *S. carpocapsae* would be ineffective.

Our recommendations for biocontrol nematode species mixes for soil types:

- Clay loam – silt loam soils: *S. carpocapsae* + *S. feltiae*
- Sandy loams – sand soils: *S. feltiae* + *Heterorhabditis bacteriophora*.

What are the differences between the commercially available entomopathogenic (biocontrol) nematodes purchased on the web from the persistent NY strains?

Biocontrol nematodes purchased from commercial sources have lost the ability to persist in the soil for any significant length of time after application. Many commercial strains persist in the soil for only 7-30 days and require application timing to be closely matched with the presence of their target host and an annual reapplication is required. In contrast, the NY persistent strains of biocontrol nematodes are carefully cultured to maintain their evolutionary ability to persist across hostile conditions such as the lack of available hosts, temperature extremes (e.g. winter, dry soil conditions) and drought. NY persistent strains are applied a single time and persist in the field for many years following application; not surprising because they

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were isolated from NY soils where they have evolved for a few million years. If the NY persistent strains are cultured carelessly, they also quickly lose their ability to persist and are no better than the commercial strains purchased off the web.

The EPNs arrive in wax worm hosts and need to be rinsed out through a strainer into the tank water.

How are biocontrol nematodes applied?

Biocontrol nematodes are usually applied suspended in water and applied at a minimum of 50 gallons of water per acre. This can be accomplished in numerous ways but several factors need to be remembered. 1) Nematode-water solution needs to be applied within a few minutes if the water solution cannot be aerated in some fashion. High concentrations of nematodes suspended in water quickly deplete the dissolved oxygen and suffocate. In addition, there needs to be some level of mixing or agitation because nematodes will settle in the water solution, resulting in an uneven application. 2) Mixing nematodes in with fertilizer solutions for application is not viable because interactions between the fertilizer and the nematodes cause nematode death. 3) Biocontrol nematodes are ultra violet (UV) sensitive so applications need to be made under conditions to protect them from UV. Applications should be made late in the day or on cloudy/rainy days or into fields where sufficient plant growth is present to give the soil surface adequate shading to protect the nematodes from UV until they have entered the soil.

Biocontrol nematodes can be applied with a wide array of equipment depending on the size of the area to be treated. If a commercial pesticide sprayer is used, all screens and filters need to be removed and the nozzles changed to a "stream type" nozzle to apply the nematodes in a concentrated stream. On smaller areas, a backpack sprayer or watering can will work. Several farmers have used a water tank on an ATV and made a boom from PVC pipe. Holes were drilled in the pipe for water streams and gravity flow was used. Whatever the application equipment, it needs to be calibrated so the applicator knows the water volume per acre and can adjust the nematode solution concentration for the appropriate application of 41 million nematodes per acre.

Application timing:

Biocontrol nematodes which are persistent, can be applied anytime during the growing season when soil temperatures are above 50 ^{0}F. Ideally, nematodes should be applied when there are host in the soil so they can immediately go to work and reproduce. However, the NY persistent strains have the ability to sit and wait for months before needing to attack hosts and reproduce. We request that no nematode applications be made after October 1st. Applications are made to the soil surface under conditions of low UV exposure (late in the day, rainy/overcast days, in cover crops where there is adequate ground shading). Field tillage has no impact on biocontrol nematodes. In addition, if nematodes are applied before field tillage, the movement of soil during tillage helps the nematodes redistribute throughout the field and help them fill in the gaps which may occur during application.

Where can I get Biocontrol Nematodes that are adapted to persist in NY soils across growing seasons?

Currently, there are two sources to purchase biocontrol nematodes adapted to NY growing conditions with their persistent genes intact to persist across growing seasons (and winter) in NY. If there is a member of the Organic Community who is interested in starting a business to provide these NY persistent nematodes to the NE Organic Agriculture community, the Shields' lab at Cornell can assist with the requirement to successful rear and produce the biocontrol nematodes for resale.

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- Shields' Lab, Cornell University: Tony Testa email: at28@cornell.edu cell: (607) 591-1493

For additional assistance please contact:

- Teresa Rusinek, CCE Eastern NY Commercial Horticulture team. Email: tr28@cornell.edu Or your local extension agent.

Sprouting Broccoli and Mini Cabbages for Early Spring High Tunnel Harvests

Elisabeth Hodgdon, CCE ENYCHP

Providing a diverse offering of vegetables for early spring CSA shares and markets can be a challenge. Offerings usually consists of leftover storage root crops, salad greens, and radishes. Due to their cold tolerance and quick growth, brassicas are promising crops for cool spring high tunnel environments. Last spring, we trialed two varieties of sprouting broccoli and four varieties of small cabbages at the Cornell Willsboro Research Farm to develop seeding date and variety recommendations for our region. We harvested fresh broccoli and tender cabbages in mid-May—excellent timing for the start up of farmers market season.

Background

Spring broccoli is commonly grown in England in the winter and includes green, purple, and white varieties. Rather than forming one large crown, sprouting broccoli produces a small crown and many lateral shoots. The small floret, stem, and attached leaves of the sprouts are all eaten, either steamed, roasted, boiled, or fresh. Some prefer to call sprouting broccoli "asparagus broccoli" because it can be prepared similarly to asparagus. Sprouting broccoli has a mild flavor, and stems are very tender. In our trial, we grew 'Burgundy' and 'Montebello' (Fig. 1) two varieties that do not need long exposure to cold to produce florets (unlike winter broccoli grown in Europe).

Fig. 1. Lateral shoots ("sprouts") from broccoli varieties (left) and main crowns of 'Burgundy' (right)

Our interest in miniature cabbages arose from consumer trends toward smaller vegetables. Small cabbages are easier for smaller households to prepare and store. In particular, some small varieties are especially well suited for fresh salads and have very tender, lettuce-like leaves. Fresh cabbage in May is arguably much better eating quality than cabbages that have been in storage since the previous fall. Tender cabbages are used in place of lettuce in Eastern European cuisines. In our trial, we grew 'Tiara,' 'Katerina,' 'Caraflex,' and 'Omero' (Fig. 2).

Fig. 2. Miniature cabbages harvested in June at a young stage. The purple variety 'Omero,' not pictured, produced few marketable heads.

Methods

We seeded our broccoli and cabbages on Feb. 15 and Mar. 1, 2021 in 128-cell trays. A neighboring farm grew our seedlings for us in a heated propagation greenhouse until they were ready to transplant. We transplanted the seedlings into our unheated 30x90' high tunnel on March 22. We used 80 lbs N/ac for broccoli and 20 lbs N/ac for the cabbages and applied K according to our soil test results. We grew both crops in 4' wide beds each with two lines of drip tape, with 12"x12" spacing for the broccoli and 12"x6" spacing for the cabbage. We replicated the treatments (variety x planting dates) randomly in the high tunnel in 4'x3' (broccoli) and 4'x2' (cabbage) plots. The spring weather was unseasonably warm in Willsboro, and we used row covers at night only a few times when temperatures dropped below 32 as the plants were getting hardened off in the tunnel. Imported cabbage worms and voles were our major pests in the tunnel. We used DiPel and snap traps to manage these.

The sprouting broccoli was ready to harvest on May 21. We harvested the main crowns, and then harvested the sprouts 2-3 times per week until the plants began to bolt and quality declined. Harvest of the cabbage was more sporadic, with harvest beginning on May 26 and extending into June and July. We weighed the crop harvested from our plots, and measured the diameters and individual head weights of the cabbages.

Results

'Burgundy' and 'Montebello' were similar in terms of yield. While plants from both seeding dates were ready to harvest at the same time, the early-seeded (Feb. 15th) plots yielded significantly more broccoli. Extrapolated to a full bed length (4'x90'), our average yields from the early-seeded plots varieties were 125 lbs (Burgundy) and 131 lbs (Montebello). A grower could grow both varieties and sell them in mixed bunches or bags. The green and purple hues of these varieties look very attractive together. Nearly half of the total yield from our plots were from the "main" crowns, and most of the yield was harvested before June 1 (Fig. 3). These crowns could be sold 3-4 in a bunch, rubber banded together. Not all of the sprouts we harvested had long stems, so bagging these would likely be the best way to market them. No washing or leaf stripping would be needed for the broccoli. Growers could likely obtain a premium price for fresh broccoli in May, making this a potentially lucrative crop given its short timeframe.

For our cabbages, there were stronger varietal differences, but similarly to the broccoli, seeding date had little effect on harvest date. The highest yielding variety was 'Tiara,' with 0.99 lbs/sq ft (356 lbs per 4'x90' bed extrapolated; Fig. 4). Late-seeded Caraflex and Tiara, and both seedings of Katerina yielded similarly. We harvested

significantly lower yields of 'Omero,' the only purple cabbage in our trial. Most plants failed to form heads that were larger than a baseball, and were still not ready to harvest by August 1st when we terminated the trial. Most cabbages were ~4" in diameter with outer leaves removed, although the heads looked more attractive with loose outer leaves intact.

Conclusions

Being the first to market with cabbage and broccoli presents a marketing opportunity for growers interesting in diversifying their product offerings. The broccoli and miniature cabbages we grew all had excellent eating quality, but may require a small amount of consumer education in preparation and use. All varieties were easy to prepare, and all harvested parts are tender and edible. From the growers' perspective, quick spring brassicas may fit well into existing rotations. Broccoli and cabbage could fill a niche in crop rotations, planted after winter spinach is removed in late March and harvested before a late cucumber or other warm season crop is planted in July. These specialty crops could fit nicely into existing rotations on farms while offering a novelty to farmers market customers, CSA members, or restaurants highlighting local produce.

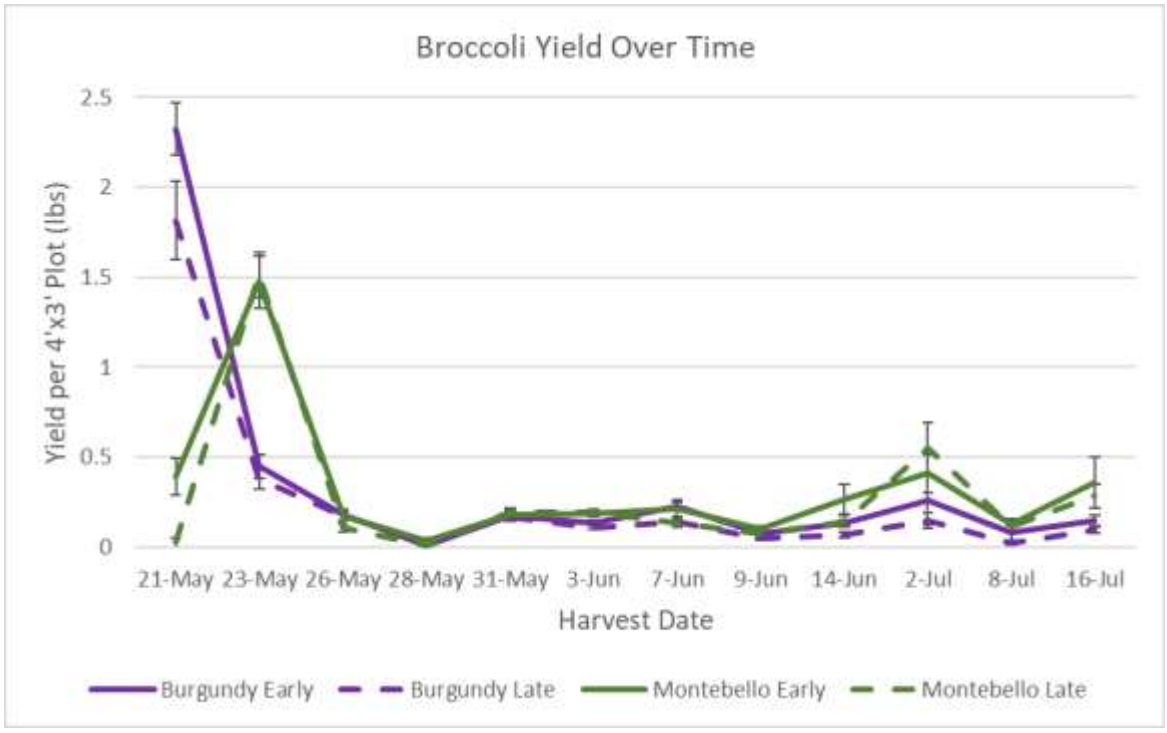

Fig. 3. Sprouting broccoli harvest over time from experimental plots

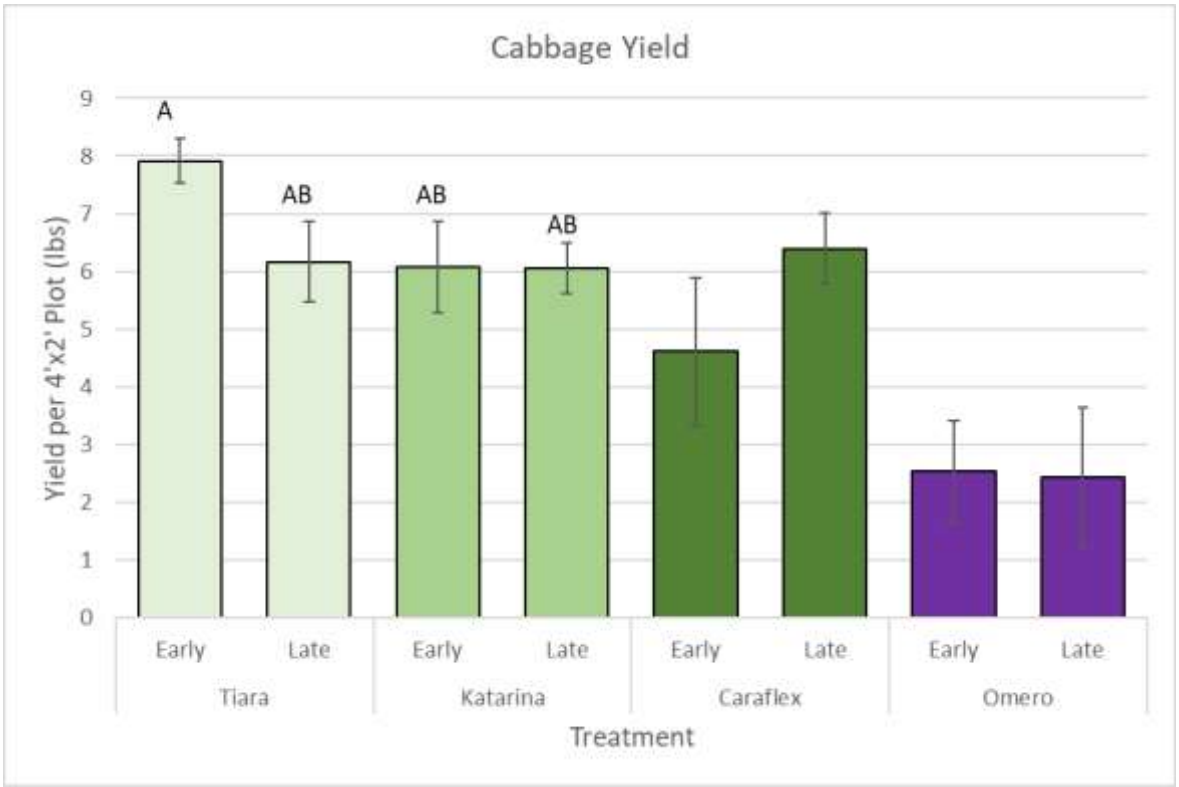

Fig. 4. Total cabbage yield from experimental plots

New York Berry Price Information—2020

Zoey Yang, Kristen S. Park, and Miguel I. Gómez, Cornell University

Editors' Note: This is an edited version of the 2020 biennial price information survey supported by the NYS Berry Growers Association. The survey collects price information so that commercial growers can make future pricing decisions. Given the rise in input costs growers should take time to absorb the information in this article, and click here to access the unedited version which includes more detail about the survey and respondent demographics as well as information related to how much spending in 2020 was specific to the pandemic. Kristen Park will be presenting the data in full at the 2022 Empire Producers EXPO in January. The berry sessions are available both in-person and virtually.

Summary

Ninety-nine farms in 37 counties that are currently producing berries completed the survey. Although the number of returned surveys was lower when compared to the previous study conducted in 2018, the results are robust. The average berry acreage was 9 acres and the average total farm size 177 acres. The size distribution of berry acres is similar to that from the 2018 survey. A large majority of our respondents farmed other crops in addition to berries.

The survey results indicate the prices of berries in New York State increased across most marketing channels for each berry, although some exceptions exist. This is important to note as the entire berry season took place during the COVID-19 pandemic. In addition, approximately 80% of the farms reported having increased expenses to comply with the pandemic safety measures.

The prices that growers received ranged greatly. These likely depended on many factors, but producers selling their berries at a price significantly less than the average sales price found in the report may want to re-evaluate their prices for the good of the industry as a whole.

Survey Data

More respondents grew blueberries than any other berry variety, followed by June-bearing strawberries, summer raspberries, fall raspberries, blackberries, and day-neutral strawberries(Table 4). Thirteen percent of growers produced other berry types, including aronia berries, currants (black and red), gooseberries, honeyberries, juneberries, black raspberries, and saskatoon berries. While many berry growers (47.5%) grew only one berry variety, some growers (20.2%) grew four or more varieties. June-bearing strawberries and day-neutral strawberries are considered different varieties, as are summer and fall raspberries.

Most respondents sold berries through u-pick (80.3%) as well as various retail channels (76%), such as farmers markets, farm stores and stands (Table 2).

Table 1. Percent of Respondents Producing Different Berry Varieties

Berry variety	% of respondents
Blueberries	77.8
Strawberries-June bearing	41.4
Strawberries-day neutral	10.1
Raspberries-summer	39.4
Raspberries-fall	15.2
Blackberries	16.2
Other varieties	13.1

Table 2: Percent of Respondents Using Various Marketing Channels

Marketing Strategy	2009	2012	2018	2020
		% of respondents		
U-pick (pick your own)	43.2	63.2	79.5	80.3
Wholesale	24.1	33.3	40.2	40.6
Retail	50.0	70.9	76.1	76.8
Value Added	14.2	18.8	22.2	29.3

Berry Price Data

Prices for four major berry crops, strawberries, blueberries, brambles, and ribes, and sold through various market channels, including u-pick, wholesale, and retail (farmers market, farm stores and stands, retail stores, and online orders) were gathered (Table 3).

U-pick and wholesale prices for almost all berry types, the exception being blackberries, increased in 2020. Interestingly, retail prices, an average of all types of retail including farm store, farmers market, sales to retailers, and online sales, dropped from 2018. Whether the pattern of price increases in u-pick and wholesale and decrease in retail were a result of market pressures from the pandemic is uncertain.

Conventional vs Organic Prices

We compared prices of conventional berries to organic berries (Table 4) and see some strongdifferences depending on the berry type. The u-pick prices for blueberries, strawberries, and summer raspberries were quite similar, but their wholesale prices were significantly higher.

We did not have enough fall raspberry observations or blackberry u-pick observations to report these prices.

Table 3: Average Price per Pound, 2006, 2009, 2012, 2018 and 2020

Berry	2006	2009	2012	2018	2020	2018-2020 Price Change $
Blueberries			*average price $ per pound*			
U-pick	1.49	2.21	2.17	2.83	2.89	0.06
Wholesale	2.39	2.99	3.08	3.44	3.64	0.20
Retail	3.88	4.21	4.84	5.41	5.19	(0.22)
Strawberries						
U-pick	1.32	1.76	2.07	2.68	3.2	0.52
Wholesale	2	2.3	2.34	2.74	3.26	0.52
Retail	2.38	3.4	3.72	5.11	4.24	(0.87)
Raspberries-summer						
U-pick	2.72	4.12	3.92	4.14	4.87	0.73
Wholesale	5.04	4.33	6.14	4.84	5.84	1.00
Retail	7.09	5.31	7.32	8.11	8.54	0.43
Raspberries-fall						
U-pick	2.99	3.88	3.81	4.54	4.76	0.22
Wholesale	5.21	4.79	5.53	5.91	6.6	0.69
Retail	6.93	6.54	7.66	8.74	7.89	(0.85)
Blackberries						
U-pick	NA	3.89	4.45	4.69	5.36	0.67
Wholesale	NA	4.69	5.58	5.72	5.43	(0.29)
Retail	NA	6.26	7.07	7.94	8.05	0.11

** Retail is an average across all retail outlets, including farmers markets, farm stores and stands, retail stores, and online orders.*

Table 4. 2020 Prices of Conventional Berries versus Organic Berries

Berry	Conventional	Organic	Difference*
	average price $ per pound		*$*
Blueberries			
U-pick	2.83	3.18	0.35
Wholesale	3.22	5.02	1.80
Retail	5.00	5.97	0.97
Strawberries			
U-pick	3.16	3.48	0.31
Wholesale	2.82	5.02	2.20
Retail	5.25	5.54	0.29
Summer Fruiting Raspberries			
U-pick	4.86	4.90	0.04
Wholesale	5.47	6.88	1.41
Retail	8.13	10.00	1.87
Fall-Fruiting Raspberries			
U-pick	5.10	NA	NA
Wholesale	7.00	NA	NA
Retail	8.82	NA	NA
Blackberries			
U-pick	5.36	NA	NA
Wholesale	5.72	6.00	0.28
Retail	7.94	8.68	0.74

** Difference = organic average price—conventional average price*

(Continued from page 10)

Observations and Pricing Opportunities

The average berry prices in Table 4 above reveal general changes in the average prices from 2018 and 2021. We can also examine the current year's minimum and maximum prices receivedby growers by market channel to see what they might reveal about pricing opportunities.

Table 5 below reveals the price ranges for berries sold through the market channels. Factors thatmay explain some of the differences between the minimum and maximum prices reported include:

- Farm location – farms located in more urban settings or in metro areas will have opportunities to charge more for their products. Higher prices might also be possible in high traffic, tourist areas. And higher prices might also be needed in areas where the costsof living and farming are greater.

- Production method – organic methods of production may be more expensive and certainly are rewarded with greater prices. In addition, berries produced in protected environments, such as high tunnels, can grow and ripen earlier than field produced berries and frequently can command higher prices before supplies increase during the height of the growing season.

- Berry variety – day-neutral strawberries can sometimes command a price premium as they can be produced off-season when field-grown berries are low or non-existent. Specialty or novel berries may also command a premium if the farm is located in an areawhere consumers are eager to try new and interesting berries.

- Farm services – services such as containers, baskets, or flats available to customers or even available bathroom facilities might lead a farm to consider paying for the servicesthrough slightly higher prices.

Conclusions

As noted earlier, the survey results indicate the prices of berries in New York State increased across most marketing channels for each berry, although some exceptions exist.

One on-going concern is that data collected since 2006 show that many farmers are pricing their berries significantly lower than the average prices found in the state. If demand, as well as local market indicators, suggest the seller could increase their sales prices, they are advised to do so. Farms that sell crops at a significantly lower price than the average state price/lb. make it difficult for other NYS farmers to receive fair compensation for their work.

Thank you to all NYS commercial berry growers who responded to the 2020 pricing survey.

Table 5: 2020 Berry Price Ranges

	Prices per pound		
Blueberries	Average	Minimum	Maximum
U-pick	2.89	1.50	7.00
Wholesale	3.64	1.70	6.67
Retail	5.28	2.50	8.00
Farm store/stand	5.03	2.50	10.00
Farmer's market	5.32	3.33	8.00
Online	5.65	4.50	6.50
Strawberries	Average	Minimum	Maximum
U-pick	3.20	2.00	7.00
Wholesale	3.26	1.50	8.75
Retail	5.20	2.50	14.50
Farm store/stand	5.02	2.75	15.00
Farmer's market	5.84	2.75	14.50
Online	8.40	4.00	12.00
Raspberries	Average	Minimum	Maximum
U-pick	4.85	2.50	8.00
Wholesale	9.04	2.00	14.50
Retail	9.04	4.25	14.50
Farm store/stand	8.79	4.00	15.00
Farmer's market	8.19	4.00	16.00
Online	-	-	-
Blackberries	Average	Minimum	Maximum
U-pick	5.36	4.50	8.00
Wholesale	5.43	2.00	8.00
Retail	8.05	3.00	14.50
Farm store/stand	8.24	3.50	14.50
Farmer's market	7.71	5.00	10.00
Online	-	-	-
Other berries	Average	Minimum	Maximum
U-pick	4.38	2.50	8.00
Wholesale	7.41	4.00	12.00
Retail	7.41	3.33	15.00
Farm store/stand	8.77	3.33	15.00
Farmer's market	6.37	3.00	12.00
Online	-	-	-

Commercial Cut Flower Growers—a Listserv for You!

Commercial cut flower growers now have a way to connect with the larger cut flower community in New York State thanks to the efforts Dana Havas, the CCE Cortland County Ag Team Leader and Elizabeth Lamb, a NYS IPM specialist. The pair teamed up to develop a listserv, and an upcoming blog/archive, to help provide better access to: Cornell CALS & CCE experts, community-based knowledge and networking opportunities, and knowledge of new trends, research, workshops, events, etc., relevant to NYS commercial cut flower growers.

Listserv members include NYS commercial cut flower growers of all experience levels as well as Cornell faculty and CCE experts. Havas and Lamb identified specific Cornell faculty and experienced cut flower growers who have agreed to play a vital role in making the listserv valuable and successful by sharing their experiences and knowledge. Elizabeth Lamb, coordinator for ornamental integrated pest management for NYS IPM, is pleased to see the willingness of these experts to provide input for grower questions on the list-serv and blog/archive. "This project helps us create a community to foster two-way communication to make sure that cut flower growers are successful." Dana Havas, appreciating how well the Cornell sheep and goat management listserv serves the small ruminant community, felt that a listserv would be a great response to fill in the gaps of the cut flower community.

To learn more about the cut flower listserv contact Betsy Lamb at eml38@cornell.edu or Dana Havas at dmh353@cornell.edu. To sign-up for the listserv visit https://tinyurl.com/cutflowerlistserv.

Models for the Future Apple Plots: Benefits of Pre-Plant Bio-remediation

Megan Chawner and Dr. Tara Baugher, Penn State Extension; and Mike Basedow, Cornell ENYCHP

This article was adapted from the original Penn State Extension web article, which can be found at the following link: https://extension.psu.edu/models-for-the-future-apple-plots-benefits-of-pre-plant-bio-remediation.

Introduction

Penn State Extension is partnering with tree fruit growers in a *Models for the Future* project to provide on-farm demonstrations for new, young, and minority farmers. The *Models for the Future* apple plots are serving as living classrooms where Penn State educators and growers learn from each other. We extend special appreciation to our grower cooperators—Jake Scholl, Brett Saddington, Michael and Jesse King, David Deardorff, and Arturo Diaz. This project looked at plant parasitic nematodes, which can cause tree decline and death in a new apple planting. Dagger nematodes transmit viruses, such as tomato ringspot virus that causes union necrosis and decline, and lesion nematodes feed on tree roots, which can result in stunted tree growth.

Following two years of rotations with bio-fumigant cover crops, apple trees were planted into strips of killed sod between middles of well-established endophyte-enhanced fescue. Photo: Tara Baugher, Penn State

Four M*odel for the Future* apple plots were established in 2017 at orchards across Eastern and Central Pennsylvania. From east to west, sites were established at Bedminster Orchard in Bucks County, Scholl Orchards in Berks County, Twin Springs Fruit Farm in Adams County, and the Rock Springs Orchard at the Russel E. Larson Ag Research Center near State College. The model orchards were planted with two apple scab resistant cultivars, GoldRush and CrimsonCrisp. All trees are on the dwarfing rootstock G.11, with the exception of the Rock Springs site that planted CrimsonCrisp on M.9 Nic 29.

Prior to planting the trees, all sites were planted in cover crops, including sorghum sudangrass and rapeseed. The cover crops selected have been shown to suppress plant parasitic nematodes and to maintain soil health during the rotation between orchard plantings. In 2015 sudangrass was seeded as a summer cover, and it was followed by rapeseed as a winter cover in late August/early September. The rapeseed was incorporated in April 2016, and a second rapeseed crop was planted for the summer.

Between each planting, the sudangrass and rapeseed covers were mowed with a flail mower, incorporated, and cultipacked.

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The varieties used ("Pioneer 877F" sudangrass and "Dwarf Essex" rapeseed), have high concentrations of bio-fumigant compounds, and were chosen for this project to help decrease nematode pressure within the plantings. Following two years of bio-remediation, a slow growing endophyte-enhanced fescue mix was planted in fall 2016. The well-established sod out-competes broadleaf weeds that may serve as reservoirs for viruses associated with tree decline.

Nematode comparisons before and after two years of cover crops

Nematodes were sampled before and after the cover crops were incorporated. After two seasons of cover cropping the model plot sites, populations of dagger nematode were zero (Table 1). Several nematodes that feed on roots were also reduced to zero. During the final sampling, two replant sites adjacent to the Scholl Orchard and Rock Springs model plot sites that remained fallow were also sampled for nematodes (data not shown). These adjacent fields each contained high numbers of dagger nematodes.

Table 1. Nematode assay results for "Models for the Future" apple plots following removal of previous orchard/ crop and at various stages following bio-remediation with the cover crops sorghum sudangrass and rapeseed. Note: The tolerance level for dagger nematodes is zero.

Nematodes per 100cc of soil:

Model plot	Date	Dagger	Lesion	Spiral	Lance	Ring	Pin	Stunt
Bedminster	Apr-2015	10	0	5	10	5	0	0
	Oct-2016	0	0	0	0	0	0	0
Rock Springs	Apr-2015	4	8	4	4	0	16	0
	Sep-2016	0	0	10	10	0	0	10
Scholl	Apr-2015	0	0	5	10	5	0	0
	Sep-2016	0	0	0	0	0	0	0
Twin Springs	Apr-2015	12	0	0	4	0	0	0
	Sep-2016	0	0	0	0	0	0	0

Soil health comparisons before and after two years of cover crops

Soil health is the ability of a soil to provide an environment that sustains and nourishes plants, soil microbes, and beneficial insects (Natural Resources Conservation Service – USDA-NRCS, 2013). A healthy soil needs to have good soil tilth, soil depth, and water holding capacity, while still draining well. Healthy soils should have adequate nutrients, low amounts of pathogenic organisms, and many beneficial organisms. The Cornell Soil Health Test examines many soil health parameters, and educators submitted samples for the Cornell Soil Health Test before and after two years of rotations with cover crops (Moebius-Clune et al., 2016).

The orchard soils in the Model for the Future plots started out with good to excellent soil health with a couple of exceptions (Table 2). Aggregate stability, organic matter, and active carbon started low and were improved by preplant cover crops at the Bedminster orchard site. Organic matter started very low at the Rock Springs site but was not improved after two years. The average biomass added to each model plot, based on weights of 5-subplot samples, was 15,600 lbs per acre.

Since soil health indicators improve slowly following bio-remediation, we assessed soil health again a third year following the first sudangrass cover crop. Soil organic matter finally improved at the Rock Springs site, and percent organic matter increased further at the Scholl and Twin Springs model plots. Soil health indicators that improved at all sites were surface hardness, subsurface hardness, and pH, while water capacity, aggregate stability, soil protein index, and respiration fluctuated from year to year, even though we collected samples during the same timeframe each season (early June). Overall soil health score improved from sub-optimal to excellent in the Bedminster and Rock Springs plots and from excellent to optimal in the Scholl and Twin Springs plots.

We conducted a separate study in 2017 to compare soil health from the bio-remediated model plots to the following treatments in commercial orchard sites: 1) no rotation, 2) fallow for two years, 3) agronomic crops (corn, soybeans) for two years, or 4) compost prior to planting (4 sites each). In this broader study, organic matter in the model plots was higher than in the "no rotation" or fallow plots. Compost sub-surface hardness was lower than all but the agronomic treatment. Compost soil protein index was equal to model plot levels but higher than the index of the other treatments. The soil protein index is an indicator of chemical and biological health of the soil, and is well associated with overall soil health. The findings are similar to other independent studies; however, statistical evaluations of multiple studies have shown a universally positive effect of cover crops on soil microbiome.

Prior research on soil health in orchards indicates two of the best indicators of improved soil health are early tree growth and yield. Comparisons of the model plot trees that received bio-remediation and control trees that were planted the spring following orchard removal showed that tree height, trunk diameter, yield, and crop load (yield/trunk cross-sectional area) were significantly greater as a result of bio-remediation. Yield in the second leaf increased by 34%, an approximate increase in net return of $2000 per acre.

Table 2. Soil health results for "Models for the Future" apple plantings at the beginning of site preparation and following incorporation of various cover crops and recommended soil amendments. Soil health samples were collected in early June of each year.

Orchard	Year	AWC g/g	Surface Hardness psi	Sub-surface Hardness psi	AS %	OM %	ACE Value	SR mg	Active C ppm	pH
Bedminster	2015	0.27	198	289	23.2	3.6	-	-	383	5.4
	2017	0.33	230	300	77.1	5.2	10.0	0.4	661	5.9
	2018	0.25	90	200	48.9	4.2	6.1	0.4	532	6.7
Rock Springs	2015	0.19	200	300	17.7	2.3	-	-	382	5.7
	2017	0.21	208	228	15.2	2.4	4.1	0.5	385	7.1
	2018	0.25	123	188	12.5	2.9	4.2	0.3	380	6.9
Scholl	2015	0.23	-	-	60.9	6.5	-	-	710	5
	2017	0.26	133	281	42.6	5.2	9.8	0.9	527	6.1
	2018	0.19	117	203	65.8	6.2	7.5	0.6	688	7.0
Twin Springs	2015	0.34	266	300	62	6	12.7	0.68	878	5.8
	2017	0.29	243	250	50.1	5.3	13.0	0.63	711	6.1
	2018	0.23	193	243	71.6	6.2	13.7	0.60	792	6.3

Additional Benefits of the *Model for the Future* Living Classrooms

Using grower records from this project, Lynn Kime developed interactive budgets for making decisions on orchard replant practices . For example, the reduction of dagger nematodes to the zero tolerance level resulted in an economic savings of $1000 to $2000 per acre based on the cost of nematicides, and the addition of organic matter represented a potential economic benefit of $1030 per acre based on the costs of compost and application.

Additional cover cropping and pre-plant practices are discussed in a Penn State Extension video. If you are in New York and would like to learn more about this work or orchard soil health in general, please reach out to Mike Basedow at mrb254@cornell.edu or 518 410 6823.

United States Department of Agriculture National Institute of Food and Agriculture

This project was supported by the Agriculture and Food Research Initiative of the National Institute of Food and Agriculture, Grant # 2015-70017-22852 and by a PDA Specialty Crop Block Grant titled "Sustainable Production, Business Management, and Farm Safety Innovations for Beginning and Minority Specialty Crop Producers."

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Key to Index Values

Available Water Capacity (AWC)

A measure of porosity of the soil. It is measured by the amount of water held by the soil sample between field capacity and wilting point by applying different levels of air pressure. It is an indicator of how well crops will fair under droughty conditions.

Surface Hardness

A measure of compaction in the top 6 inches of soil as determined with a penetrometer. It is an indicator of physical and biological health of the soil. High surface hardness can severely restrict the ability of roots to penetrate the soil.

Subsurface Hardness

Similar to surface hardness, except at a depth of 6-18 inches. High subsurface hardness can prevent deep rooting in soil.

Aggregate Stability (AS)

A measure of how well soil holds together under rainfall or other rapid wetting stresses. It is measured as the percentage of soil aggregates (or crumbs) that hold together under a simulated rainfall. Good aggregate stability helps prevent crusting, runoff, and erosion, and facilitates aeration, infiltration, water storage, seed germination, and root and microbial health.

Organic Matter (OM)

A measure of carbonaceous material in the soil that is biomass or biomass-derived. OM provides a slow-release pool for nutrients, and promotes resistance to drought and extreme rainfall.

ACE soil protein index (ACE Value)

Measures autoclave citrate extractable proteins in the soil, which acts as an index for total proteins in the soil. It is an indicator of chemical and biological health of the soil, and is well associated with the overall soil health.

Soil Respiration (SR)

A measure of carbon dioxide released by the soil, which indicates the level of metabolic activity of the soil microbial community. This influences organic matter accumulation, as well as aggregate formation and stabilization.

Active Carbon (Active C)

Measures the portion of soil organic matter available as a food source for soil microbes. High active carbon is associated with a large population of soil microbes, which can help maintain disease resistance, nutrient cycling, aggregation, and many other essential soil functions.

RMA Publishes Proposed Changes to the Apple Crop Insurance Policy

Elizabeth Higgins, CCE ENYCHP

A few years ago, apple growers in NYS attended listening sessions to provide feedback to the USDA RMA's apple crop insurance program. USDA has just published a proposed rule that changes the program based on this feedback and is soliciting comments through the Federal Register until February 14th, 2022. The following press release discusses a few of the changes that are proposed, including higher insured price levels for direct marketed apples.

WASHINGTON, Dec. 14, 2021 — The U.S. Department of Agriculture (USDA) announced publication of a proposed rule in the *Federal Register* to amend the Apple Crop Provisions. The proposed changes are based on stakeholder feedback and recommended changes from a contracted study on the apple crop insurance program. Following feedback from the proposed rule, USDA's Risk Management Agency (RMA) will publish a final rule that is expected to be effective for the 2023 crop year.

RMA is proposing to make changes to the apple crop insurance program that:

- Enable producers to elect different coverage levels and percent of price elections by type, which allows producers to manage individual coverage and price risk more effectively.
- Allow producers' premiums to be reduced in response to orchard management practices, such as removing or grafting trees, that typically occur after the acreage reporting date and decrease an orchard's productivity.
- Allow producers to insure at a higher price for apples sold predominantly to direct markets or premium processing markets.
- Exclude apples sold for the slicer market from being considered "fresh apple production."

Introduce a fresh fruit factor to account for the reduced market value of production insured under the Quality Option sold for a grade other than U.S. Fancy.

RMA is soliciting comments on these proposed changes. The comment period will close on Feb. 14, 2022. Interested parties can submit comments via the *Federal Register*.

How to Submit an Effective Comment

Effective comments help others understand your perspective and how proposals will impact your farm or business. This helps USDA best balance needs across impacted apple crop insurance participants.

The *Modern Stone Fruit Training Systems Webinar* is Now Available on the ENYCHP YouTube Page

Michael Basedow, CCE ENYCHP

In March 2021 we hosted a webinar on modern, high density stone fruit training systems, emphasizing sweet cherry and peach. Speakers included Dr. Jim Schupp of Penn State, Dr. Greg Lang of Michigan State, and Dr. Terence Robinson of Cornell. The full recording of this webinar can be viewed on the ENYCHP YouTube page at the following link: https://www.youtube.com/watch?v=_IuF7GImYu8&t=3s To check out some of our other videos, visit our full team YouTube channel at the following link: https://www.youtube.com/channel/UCSk_E-ZKqSClcas49Cnvxkw

Tree fruit videos on the channel include

- Precision Pruning for Early Crop Load Management
- Our Trellis Construction Panel Recording from the 2021 Winter Conference
- Our "Why are my trees growing so poorly?" Webinar
- Bloom Thinning with the Pollen Tube Growth Model Webinar
- Maturity Testing for Long-Term Storage Harvest Planning
- Our High Tech Precision Orchard Spraying Webinar
- Our Controlling Fruit Rots and Other Summer Diseases Webinar
- Our Stone Fruit IPM Series

If you'd like to brush up on Apple IPM this winter, also check out the video series hosted on the NYSIPM page here: NYS IPM Tree Fruit - YouTube **Have ideas for future video topics? Get in touch with Mike at mrb254@cornell.edu or 518 410 6823.**

2022 Empire State Producers Expo

Expanded Class Offerings, New Registration Scholarships, Organic Management Sessions, and More!

In January, the Empire State Producers Expo will gather 900 attendees from the vegetable, small fruit and bedding plant/cut flower sectors in Syracuse for 3 days of educational classes on a huge variety of production-oriented, business management, environmental stewardship, food safety, marketing, and soil health topics. The Expo's trade show boasts a full collection of ag support and supply businesses serving the produce industry. This year the Expo will also offer scholarships for attendance, a youth-education day (FFA Day), more hands-on learning opportunities and opportunities for grower networking.

This year's Expo is an in-person show on January 11-13, 2022 at the Syracuse OnCenter. The Expo will follow all local health & safety guidance. Full Expo details, including registration, are available online at nysvga.org/expo/information or paper copies can be requested by phone at 585-993-0775.

Why go to Syracuse in January?

- **High caliber educational programming**. The larger number of attendees at Expo allows us to attract speakers with more specialized knowledge and bring in growers & experts from out-of-state.
- **Specialized topics** that are difficult to organize locally
- Meet & **network with growers** from across the state, share techniques & management solutions
- **One stop shopping** at the tradeshow, with many companies offering special deals at the show
- Need **DEC credits**? You can earn up to 3.75 on Tuesday, 4.25 on Wednesday, and 4.75 on Thursday.
- **Easy** to get to location with plenty of parking

Isn't Expo Just for Large Vegetable Farms?

No, Expo offers something for all grower skill and experience levels, from the first-year market gardener to the fourth-generation farmer. Production classes will cover both organic/bioinformed and IPM/conventional management approaches. The range of topics provide something for everyone whether you're a greenhouse grower with a fall agritourism pumpkin patch, a mixed berry and maple farm, a traditional produce farm, or an urban grower looking to build out your network. We are offering

- Dedicated sessions for organic and ecologically-forward production techniques (Thur.)
- More sessions on business management & marketing (all 3 days)
- Primers on irrigation, energy savings and improving pesticide applications (Tue. & Wed.)
- Classes for niche crops like novel berries (Wed.), flowers (Wed & Thur.), nuts & ginseng (Thur.)

New Interactive Programming!

Seen enough PowerPoints? Bored of Zoom webinars? Thursday programming features several sessions that are leaving the traditional classroom style presentations behind. Attendees can work hands-on with weeds, view live beneficials, and develop their own customized IPM plan during the "Tomato IPM School". An entire "Organic Apple Production" session is following an unconference design where topics are entirely participant driven. Folks will get a chance to work in small groups to practice newly learned skills in "Talking to the Media". Several other sessions on Thursday include other interactive approaches.

More Opportunities to Network!

Responding to requests for more time and space for networking, this year we are introducing dedicated areas for grower-to-grower sharing, called "Conversation Corners". These Conversation Corners will be available for a mix of spontaneous and reserved, pre-set discussion topics. Another new feature will be the Poster Promenade, where growers can peruse research posters at their leisure.

Scholarships for New Growers, Socially Disadvantaged and those who have Never Attended Expo!

The Expo organizers recognize that the produce industry best thrives when all stakeholders can readily access and participate in professional development and networking events. That's why **we're offering up to fifty scholarships covering Thursday's registration costs to growers who identify as belonging to beginning farmer and historically marginalized grower communities.** Farmers who have never attended Expo may also apply. The 1-page scholarship applications are available online. Applications can be returned by email to sr43@cornell.edu or by FAX to 315-787-2216, attention Steve Reiners. To request a paper copy or fill out an application by phone, call 585 -993-0775. Priority will be given to applicants who submit applications by December 15. Applications received after December 15 will be considered on a case-by-case basis. Applicants will be notified of their selection status & follow-up registration steps on or before January 3rd.

Upcoming Events & Important Information

Jan 11-13, 2022 – Empire State Producers Expo
This year's Expo is an in-person show on January 11-13, 2022 at the Syracuse OnCenter. The Expo will follow all local health & safety guidance. Full Expo details, including registration, are available online at nysvga.org/expo/information or paper copies can be requested by phone at 585-993-0775.

Tax Management for Beginning and Small Farm Businesses
January 18, 2022
7:00pm-9:00pm Zoom

A one-night virtual meeting for beginning and part-time farmers that provides useful tax information enabling participants to be make better tax decisions for their business. Federal and state income taxes will be covered. Tax regulations specific to NYS will be covered as well. Register here: https://enych.cce.cornell.edu/event.php?id=1576

January 18-23, 2022 - NOFA-NY's 40th Annual Winter Conference,
Online, For more information and to register: https://nofany.org/conference/

Tax Code Benefits and Last Minute Tax Updates for Farms
January 25, 2022
7:00pm-9:00pm Zoom

For farm businesses of all shapes and sizes, tune in to learn more about key tax benefits and tax incentives that are available for farms. Because this is our last class, this workshop will also include updated tax information for the current tax season. Register here: https://enych.cce.cornell.edu/event.php?id=1577

February 1-3, 2022 – MidAtlantic Fruit and Vegetable Conference
Hershey, PA. For more information and to register https://www.mafvc.org/.

Agricultural Supervisory Leadership Certificate Program: Organizing Work for High Quality Results
January 27-March 3 (online course)
Organizing Work for High Quality Results is a six-week online course that is part of a new Agricultural Workforce Development Agricultural Supervisory Leadership certificate program. Organizing Work for High Quality Results helps new and experienced managers learn how to develop clear expectations and standard operating procedures, delegate effectively, and diagnose and correct performance problems. Registration closes and materials release January 21, 2022. Live weekly Zoom discussions will be held from 1 to 2 PM EST each Thursday from January 27 through March 3. Participation in the live sessions is highly encouraged and provides a valued opportunity for peer to peer learning and networking. To learn more: https://agworkforce.cals.cornell.edu/agricultural-supervisory-leadership-certificate-program/.

NEW VIDEO RESOURCES:

Marketing Agriculture Products Recorded Workshop Series

Are you interested in expanding your farm's product offerings in 2022? Finding markets, pricing, and market evaluation for new products are just some of the first steps. Check out this series of recorded workshop videos, created by Lindsey Pashow from CCE Harvest NY that covers those topic areas. Funding for the creation of these videos was provided by Northern New York Agriculture Development Program.

Finding Markets: The Finding Markets workshop focuses on finding markets to fit your agricultural business. (https://youtu.be/aO8Xb-pJE1M)

Pricing: The Pricing workshop focuses on finding the true cost of product, price to charge, and determining if it is a viable product for your agricultural business and market. (https://youtu.be/HP7oeX8EPrQ)

Market Evaluation: The Market Evaluation workshop focuses on techniques for evaluating both new and existing markets for your agricultural products. (https://youtu.be/BvWJ3F4eW4w)

Cornell Cooperative Extension
Eastern NY Commercial Horticulture Program