Features:

New CFR Page: Page 1

Blueberry Harvest: Pages 2-3

Pollinator Network-CALS: Page 4

Pollinator Protectors: Page 5

Strawberry Soil Health: Pages 6-8

2017 Pest Management Guidelines for Berry Crops: Page 9

Berry Workshops: Page 10

Nursery Guide for Berry and Small Fruit Crops Pages 11

Berry Growers Seek New Organization Page 12

Growing Berries for Profit on a Small Scale Page 13

Come to Mexico with NARBA! Page 14

Upcoming Events! Page 15

2017 HV Commercial Fruit Growers' School Page 16

Changes to the Worker Protection Standard Page 17

Using Exclusion Netting to Combat SWD Page 18

Editor's Note Page 19 Cornell University College of Agriculture and Life Sciences

New York Berry News

Volume 16, Number 1

Winter 2017 Edition

New Cornell Fruit Resources Website

Ð	Cornell University College of Agriculture & Life Sciences	Search:		go	
		O This	Site 💿	Cornell	

Cornell Fruit Resources: Berries



Coming Soon: A new and improved Cornell Fruit Resources Page!

This updated website will include all of the same features including Berries, Tree Fruit, and Grape Pages, as well as other information in a more viewer-friendly format.

Any suggestions and input on how to strengthen the new website would be greatly appreciated.

Contact information is listed below:

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Blueberry Harvest

Article originating from *American Fruit Grower*. Direct link is posted on the GrowingProduce website: http://www.growingproduce.com/fruits/berries/researchers-develop-lower-cost-options-for-blueberry-harvest-assist-systems/

Researchers Develop Lower-Cost Options For Blueberry Harvest Assist Systems

By: Christina Herrick

The highbush blueberry industry continues to grow in this country, expanding to more than 61,000 acres in production. With this growth in production comes an increasing need for labor to maintain the bushes and harvest the fruit. As labor becomes more of a challenge for growers, a team of researchers is seeking mechanized solutions for this labor shortage.

Fueled by a \$2.4 million USDA-National Institute of Food and Agriculture grant, researchers from the University of California, Berkeley; University of Florida; University of Georgia; Michigan State University; Mississippi State University; North Carolina State University; Oregon State University; Penn State University; Washington State University; and USDA's Agricultural Research Service (ARS) seek to provide lower cost options.

Researchers have already developed a sensor to measure the impact of harvesting on the tender fruit, and this project seeks to pair the sensor with research into costeffective mechanized harvest options for small- and midsize growers.



Improving Ground Losses

"A highly efficient, affordable, intermediate harvesting system that could improve fruit quality and reduce ground loss would be welcomed by stakeholders of all farm sizes," says Fumiomi Takeda, lead scientist at the USDA-ARS Appalachian Fruit Research Station in Kearneysville, WV, who is a co-principal investigator on the project.

Takeda says the research team is focusing on semimechanical harvest systems aimed at mid- and small-sized growers as an alternative to the commercial over-the-row harvesters now available on the market, while still improving labor efficiencies. The team is looking at shake and catch systems that could harvest ripe fruit gently and minimize bruising so the fruit can have a longer freshmarket shelf life. Takeda says fruit harvested by traditional over-the-row harvesters is bruised and becomes soft which can reduce shelf life.

"Our research is concentrated in developing designs for fruit detachment equipment that can harvest ripe fruit more gently, designing fruit catching surfaces that will not bruise the fruit," Takeda says. "Our approach to semimechanical harvesting is based on the integration of a self-propelled harvest platform with improved hand-held shakers and a novel berry catching system."

He says the team is using the impact sensor to study how the shake and catch system impacts fruit so they can finetune the operating parameters and design features vibration frequency, magnitude, and the shaker angle relative to the blueberry bush.

The Harvest Assist System

The team's system is a moving platform pulled by a small tractor, or preferably self-propelled and self-steering — what he calls an "in-between" system. Workers stand on the platform with a shaker to "pick" ripe blueberries. The harvested fruit lands on soft catch plates and fruit collection surfaces and the conveyors transfer the fruit into lugs. With this system, the workers can focus on harvesting blueberries and let the machinery collect the harvested fruit and fill the lugs.

Blueberry Harvest Continued...

"In the last three years we used hand-held, air-powered shakers to remove fruit from the plant and a tractor-pulled fruit catching platform with modifications to reduce fruit bruising," he says. "In 2017, we plan to have an agricultural equipment manufacturer build the project team a self-propelled, self-steering platform with a powered fruit-conveyance system and fruit-catching surface that will not bruise the fruit detached by semi-mechanical, hand-held shakers."

Takeda says after research in the field this year and last, the team sees this new technology as quite promising. Workers do not need to make several steps — positioning, shaking, handling collection of the fruit, etc. He says the semi-automated harvest is 10- to 20 times faster than hand harvesting. The shakers used are tethered and counterweighted on the system, which he says also helps reduce injuries and fatigue.

Ergonomics Of Harvesting

Andris Freivalds, an industrial engineering professor with Penn State is leading the ergonomic analysis of this harvesting system. So far, Freivalds' team of engineers has conducted physiological analysis of workers operating the shaker, including muscle activity and heart rate. Measurements of muscle strain indicated shaker weight and vibration were critical factors to consider for worker comfort.

The light-weight shakers caused less muscle strain in the back, shoulders, and forearms. In field studies, a toolsupport balancer showed positive effects and a shock-absorbing pad reduced the vibration caused by the pneumatic system. The team plans to include the modifications of shock-absorbing pads on the handles, as well as tethering shakers to platforms.

"The harvest aid system that is tethered to a tool balancer will definitely reduce fatigue because workers do not need to hold up the shaker all the time," he says.

Another modification is a new berry-catch plate to cut losses. However, the ultimate goal of this project is to create a system that is scale neutral — so it can be appealing to small growers as well as to large growers through increases in high-quality yields and worker efficiency.

"The performance of our new harvesting platform will be appealing to large and small growers alike. Its cost will be substantially lower than a regular over-the-row harvesters, which can currently cost as much as \$200,000," Takeda says.

Improvements Over Current Systems

The research conducted so far points toward a mechanical harvesting system that has high harvesting efficiency and at the same time delivers fruit with little or no mechanical damage. Further development of sensor technologies will be useful for improving both the harvesting and packing line efficiency and blueberry quality.

Takeda says current over-the-row harvest systems can cause losses of anywhere from 20% to 30% due to bruised fruit. Takeda's co-principal investigator, Charlie Li of the University of Georgia, is developing a non-invasive approach to detecting damaged fruit. The team is using a near-infrared hyperspectral imaging system.

In preliminary research, the team has been able to detect the amount of bruised tissues in individual blueberry fruit. Li says he is optimistic that with further improvements in efficiency and the accuracy, it can be used for on-the-line sorting of bruised blueberries.

Pollinator Network- College of Agriculture and Life Sciences



Page 5 of 19 NEW YORK BERRY NEWS VOL. 16 No. 1

Pollinator Protectors

By Matt Hayes; Originally posted in <u>periodiCALS</u>, Vol. 6, Issue 2, 2016 <u>https://cals.cornell.edu/news/periodicals/pollinator-protectors</u>



Foraging for food in the flowers of crops—and in the process pollinating crops from apples to zucchini—bees are essential to billions of dollars in annual agricultural production worldwide, and \$500 million in New York alone. Our agricultural success has been due in no small measure to an <u>alliance with our partner pollinators</u>. But last year, more than 50 percent of the honeybees in New York perished, on the heels of a decade of decline for managed and wild bees alike.

Disease outbreaks, diet, habitat fragmentation, pesticide exposure and even sub-optimal beekeeping practices have all been raised as possible contributors, and experiments parsing their relative importance and possible interactions are providing exciting clues. CALS research scientist Scott McArt, Ph.D. '12, started by asking just what managed honeybees are actually eating.

Honeybees typically forage about a mile away from their hive in all directions, more rarely up to nine miles. While orchards near Lake Ontario often have expansive swaths of apple trees, elsewhere in New York, orchards are often rimmed by woody areas or nearby fields planted with diverse crops, offering more complex environments for bees.

For a project funded by the New York Farm Viability Institute, McArt and his students systematically inventoried individual pollen grains carried by bees back to hives placed in 30 New York apple orchards. Those bees tasked with pollinating apple trees, it turns out, only foraged about 10 percent on apples, gathering pollen from up to 20 different sources during apple bloom.

"Honeybees are brought to orchards to pollinate apples, but the bees don't know that," McArt said. "Our data show that honeybees are pollinating apple, but they're also visiting many other plants during the apple bloom period."

McArt and colleagues also quantified pesticides in the pollen that honeybees carried back to the hive. While fungicides for apple diseases were the most abundant pesticides in honeybee-collected pollen and correlated with apple pollen foraging, the levels of insecticides—which account for the greatest pesticide risk to bees—reflected the number of non-apple pollen types collected by bees.

"The pesticide results are very interesting. Our results suggest that the greatest pesticide risk to bees during apple pollination is coming from non-focal crop sources of pollen. Whether these pesticide residues are coming from contaminated wildflowers in the field margins or other sources in the agricultural landscape is clearly a topic we need to investigate further."

Cornell researchers are also working to figure out the relative importance of diseases versus pesticides. A \$2.2 million project funded by the National Institutes of Health and led by McArt will better explore how pathogens spread among the 416 bee species in New York. And this summer, as lead of the newly established New York Tech Team for Beekeepers, Emma Mullen, honeybee extension associate, visited hobby and commercial beekeepers for detailed assessments of their practices and the environments to which bees are exposed.

By measuring aspects such as pest and virus levels and taking wax samples to determine pesticide levels, Mullen will be able to compare health and survival rates and give beekeepers specific actions they can take to improve bee health—and, by extension, the availability of our state's most important food crops.

"By next year, we hope to have identified the vital attributes to bee colony health and steps to improve operational success for beekeepers of all sizes," Mullen said. "Ultimately, we'll be describing best practices for healthy, productive and viable colonies."

Strawberry Soil Health

By Marvin Pritts, School of Integrative Plant Science, Horticulture Section, Cornell University, Ithaca, NY 14853

Farmers and researchers are learning that physical and biological characteristics of the soil are major contributors to plant performance, along with the chemical component that has received the most attention in the past. This integrated approach to assessing soils is termed "soil health." While the important role of physical and biological components on overall soil health is intuitive and has long been understood by organic farmers and those desiring to achieve more sustainable production, only recently have methods been developed to quantify the biological components of the soil. The reasoning of soil health practitioners is that cultural practices that positively enhance measurements of biological soil health should then also benefit strawberry productivity.

Strawberry growers face many difficulties in maintaining healthy strawberry fields. In addition to stress from cold and damp weather, soils may contain pathogens that can affect roots that are exposed to suboptimal conditions. Often pathogen levels are often low that they are not detected or expressed in healthy plantings. High organic matter content (OM) is thought to help sustain biological soil activity by facilitating growth of beneficial organisms that compete and suppress pathogenic organisms. A large and diverse soil microbial community also is essential for nutrient cycling. Soil C and N are first immobilized in microbes then slowly released once the microorganisms are decomposed, freeing these nutrients in a plant-available form. Therefore, even though plants exude C from their roots, organic C pools in soil are important not only to increase the cation exchange capacity of the soil, but also for N cycling. Some microbes are also able to fix N2 gas from the air, providing another source of plant available N. The presence of microorganisms in the soil also increases soil aggregation through bacterial mucigel and fungal hyphae. Aggregation improves water infiltration, aeration, and reduces erosion. Without soil C these important microbial populations would decline.

In New York, most strawberries are grown using the matted row production system. Straw is used to protect the strawberry plants over winter, then in the spring, the straw is raked between the rows and incorporated. This straw is useful for suppressing weeds, improving water retention and decreasing fruit rot. In addition, strawberry fields are cultivated regularly since herbicides labeled for use are few. Cultivating for weeds is recommended up to every 10-14 days in new plantings. In this perennial production system, soils is cultivated frequently, straw is applied as mulch (recommendations range from 2-5 tons/acre/season), and is then incorporated into the soil over time. Straw contains high levels of C, which should fuel the biological health of the soil.

In 2012, through help of SARE funding, seven strawberry fields were given Cornell Soil Health Tests (CSHT, http://soilhealth.cals.cornell.edu/) during a more complete berry soil health survey. However, soil biological measurements from the CSHT were ubiquitously low. On a relative scale of 0-100, most tested biological indicators scored below 26. The CSHT measures soil biological activity with an OM test, an active carbon test, a potentially mineralizable nitrogen (PMN) test, and a root health rating. These tests indicate microbial abundance and root health in the soil. Therefore it was somewhat surprising that strawberry fields tested low for traditional indicators of soil health, particularly since large amounts of straw – a form of organic matter - are added each year.

Strawberry Soil Health Continued

Several cultural practices are known to impact soil health such as preplant cover cropping, composting, mulching and tillage practices. For example, in one study mulch significantly increased microbial biomass nitrogen (N) and carbon (C), soil extractable N, net N mineralization, and soil microbial respiration compared to bare soil – all of which should benefit strawberry plant growth. However, the quality of the mulch affected the amount of soil improvement. High C:N ratio mulch additions led to N immobilization. Organic material with less than 15-17 g N/kg dry weight can temporarily immobilize soluble N, but annual applications of organic matter (e.g. straw) containing less than 10 g N/kg dry weight can enhance soluble N availability over long periods of time as it decomposes. The rate of mulch decomposition affects the longevity of the change in soil properties after mulching. Wood chips can sometimes immobilize N, damage crops when they are applied, and release leachates that are allelopathic to certain crops, but not all types of wood chips have that effect. Soil can compound an effect as soil mulched for the first time does not have a microbiome adapted to organic matter (OM) decomposition and therefore mulch decomposes more slowly than on a soil that is regularly mulched.

Strawberry fields are frequently tilled, first to break up the soil before planting, then to manage weeds. Tillage and cultivation practices have been found to increase runoff, decrease macro- and micro-porosity, form plow pans, and cause soil organic carbon (SOC) loss over time. Tilling exposes pockets of soil OM that can then be mineralized, causing a flush of plant available C and N in the short term. Microorganisms are stressed after the disturbance and may be unable to assimilate the nutrients effectively, so often C and N are leached away. Switching to a reduced-till system can increase soil and particulate OM. Limited compaction in the absence of pathogens can be tolerated by strawberry plants, but compaction in the presence of pathogens is detrimental.

In a mulched system such as strawberries, the physical separation of the soil and the mulch slows decomposition, but then tilling mixes the soil and OM together, making the OM more accessible to microorganisms in the soil. Consequently, the microorganisms can break the OM more easily. This leads to faster litter decomposition in tilled systems than untilled systems. Therefore, long-term substrate use efficiency is higher in systems with litter left on the soil surface than incorporated litter due partially to slower breakdown of litter.

In some situations, long-term additions of straw have been shown to gradually improve soil productivity due to soil structure properties changes such as increased aggregation, water retention, and N supplying power. Large additions of straw to strawberry fields should therefore demonstrate these improvements. However, the biological indicators of the CSHT scored low, highlighting a disconnect between expected outcomes and test results.

In very degraded soils, the addition of organic matter through cover cropping or compost amendment prior to planting will most always enhance strawberry performance. However, in heavier soils with a previous history of strawberries, compost amendment may be detrimental. Cover crops are usually beneficial, but there are situations where certain cover crops can negatively impact strawberry growth and performance, particularly in replant sites. Similarly, we have found straw amendment prior to planting can have a negative effect on strawberry plant growth.

Strawberry Soil Health Continued

Life beneath the surface is very complex and this not surprising considering that tens of thousands of species of microorganisms can be present in just a teaspoon of soil. There are a number of processes and interactions occurring there that make generalizations difficult. The table below summarizes what we think we know about organic matter and composts in relation to strawberry plant performance and soil health. And it demonstrates why conclusive generalized statements about cultural practices are difficult to make.

Practice	Expected response	Conditional response
Cover cropping prior to planting	Increased soil organic matter and weed suppression	Certain cover crops can harbor diseases and nematodes that can transfer to strawberry plants. Some cover crops can become weeds in strawberry fields if not managed properly.
Compost incorporation prior to planting	Enhanced microbiological activity and increased water- holding capacity; decreased pathogen activity through competition.	May hold too much water and create conditions favorable for disease. May increase salt content of the soil.
Straw mulch incorporation	Enhanced soil biological activity and improved soil structure.	Strawberry plants may not perform well with preplant straw mulch incorporation.
Tillage	Reduced weed pressure followed by quick release of nitrogen and active carbon from organic matter pools.	Nitrogen flush is short-lived and pools are eventually depleted. Soil structure can deteriorate and compaction increase under too much tillage.
Organic matter incorporation	Enhanced microbiological activity and increased water- holding capacity.	Soil may not contain the microorganisms at a sufficiently high level to rapidly decompose the organic matter, thereby tying up nitrogen and inhibiting crop growth particularly if the C:N ratio of the OM is high.
Soil health testing	Identifies indicators that are low and suggests cultural practices to improve those indicators.	Indicators developed for field crops may not be good indicators for perennial strawberries.



Page 9 of 19 NEW YORK BERRY NEWS VOL. 16 No. 1

2017 Cornell Pest Management Guidelines for Berry Crops Now Available



The 2017 edition of the Cornell Pest Management Guidelines for Berry Crops is now available. This annual publication provides up-to-date pest management and crop production information for blueberry, bramble (raspberry and blackberry), strawberry, ribes (currant and gooseberry), cranberry, elderberry, and Juneberry (Saskatoon) production in New York State. Information on wildlife management and harvesting, handling, and transporting berry crops is also included. This publication has been designed as a practical guide for berry crop producers, crop consultants, ag chemical dealers, and others who advise berry crop producers.

This year's Berry Guide features updated pest management and pesticide information for a variety of berry crop insect, disease, and weed pests. Pest managers will find this information helpful as they plan their pest management strategies for this year's growing season.

The Cornell Guidelines are available as a print copy, online-only access, or a package that combines print and online access. The print edition of the 2017 Berry Guidelines costs \$31 plus shipping. Online-only access is \$31. A combination of print and online access costs \$43.50 plus shipping costs for the printed book.

Cornell Guidelines can be purchased through your local Cornell Cooperative Extension office or from the Cornell Store at Cornell University. To order from the Cornell Store, call (844) 688-7620 or order online at http://store.cornell.edu/c-875-pmep-guidelines.aspx.

UPCOMING WORKSHOPS IN WESTERN NY AND LONG ISLAND

As dramatic weather events increase, pest pressure intensifies, and local markets vitalize, New York berry growers are looking for ways to protect their crop and lengthen their season. Growers and educators are trialing techniques for growing berries under cover. Berry farmers across New York can attend one of three regional workshops offered by the New York State Berry Growers Association (NYSBGA) this winter to learn more about these innovations in berry growing. These day-long workshop will feature multiple short presentations, hands-on or interactive activities, and words from growers discussing the newest research in tunnels and exclusion netting.

Many New York State farmers who are experimenting with growing berries undercover are having great successes. "I am so glad I listened to Marvin Pritts' recommendation to grow my day neutral strawberries under low tunnels," said Guinevere Panek, co-owner of Panek's Pickin Patch. "There was much less water damage and disease pressure, resulting in more marketable berries. I picked two to three weeks longer than usual. I was able to supply my CSA members with strawberries right through the end of October. There was even ice on top of the tunnels one morning, but the berries underneath were beautiful!"

Presentations by Cornell researchers, Extension educators from PSU and Cornell Cooperative Extension, and experienced berry growers will address advances in growing under cover. These include: day-neutral strawberry cultivars for low tunnels, choosing and recycling tunnel plastic, using technological tools to predict weather events, disease and insect management, growing raspberries in high tunnels, and using exclusion netting to protect against Spotted Wing Drosophila. Attendees will participate in hands-on activities, and receive a take-home resource guide and supplies.

DEC credits in categories 1A, 22, 23 and 10 have been requested.

Workshop registration is **\$25 per person for NYSBGA Members**, and \$**50 per person for Non-Members**, which includes lunch and take-home materials.

Participants can save on workshop registration by joining the NYS Berry Growers Association; 2017 Membership is \$125 and applies to two individuals per farm. Associate Membership is \$75 for non-profit agricultural professionals. Business members can join for \$250 and receive two advertisements in our newsletter which reaches berry growers throughout the state.

NYSBGA President, Dale IIa Riggs says, "Berries are one of the most sought after agricultural products grown in this state and enjoy only positive attributes. The ground-breaking research on protected culture currently being done in NYS gives NYS growers an important "leg up" on competitors from other states by enabling berry production to occur five to even seven months a year." The workshops are sponsored by the NYS Berry Growers Association, Cornell Cooperative Extension, Cornell University College of Agriculture and Life Sciences, with funding support from the NYS Legislature.

For workshop details and agendas visit:

www.hort.cornell.edu/grower/nybga/

or contact: Cara Fraver, NYS Berry Growers Association, (646) 284-7762, nysbga@gmail.com

February 28, 2017: CLEREL (Cornell Lake Erie Research and Extension Lab) 6592 West Main Road Portland, NY, 14769 *Register by February 21*. <u>Registration</u> <u>Program</u>

March 7, 2017: Cornell Cooperative Extension Suffolk County Extension Education Center 423 Griffing Avenue, Suite 100 Riverhead, New York 11901-3071 *Register by Feb 28th* <u>Registration Program</u> Visit the New York Berry Growers Association website for more information.

Nursery Guide for Berry and Small Fruit Crops

As Cornell Fruit Resources is being updated, so is the Berry Nursery Guide!

Available through <u>https://blogs.cornell.edu/berrynurseries/</u>, a list of Nurseries are displayed alphabetically.

Not on the list? Want to be added? Send the following information to Craig Cramer at cdc25@cornell.edu:

- Nursery Name
- Website Address
- Email Address
- Mail Address
- Fax
- Phone
- Cultivars you currently sell
- Cultivars you are not selling this year but sold last year

In addition, we would be glad to receive your catalog each year. Mail or email the information with an attention or subject line "Berry Nursery Guide"



NEW YORK BERRY NEWS VOL. 16 No. 1

Page 12 of 19



Ontario Highbush Blueberry Growers' Association

For Immediate Release July 25, 2016

Berry Growers Seek New Organization

Ontario's two berry grower organizations are proposing to join forces and create one new organization. Ontario Berry Growers' Association and the Ontario Highbush Blueberry Growers' Association have received agreement from the Ontario Farm Products Marketing Commission (Commission) for conducting an expression of opinion vote among all eligible growers of blueberries, raspberries and strawberries in Ontario. "Berry Growers of Ontario" is the new name proposed.

"We're planning **Berry Growers of Ontario** in order to help us growers earn better returns" explains Jenn VanDeVelde, a berry grower and current director of the OBGA. Jenn emphasized why the new organization is needed now: "There are so many issues facing growers today that require a strengthened organization to effectively address on growers' behalf." "The new organization will give us the structure and authorities we need to better serve growers," stated Steve Kustermans, a blueberry grower and current chairperson for the Ontario Highbush Blueberry Growers' Association. "A unified voice for all berry growers will enable us to better get government's attention and resources to support our sector." The new organization is not seeking any authorities related to pricing or control of supply. It will be directing its efforts towards marketing and promotion, research and grower advocacy. "Our budget will be lean and modest," commented Jenn, "and will ensure that growers of each crop receive a fair allocation of resources towards that crop leading to more research, promotion and crop protection for every crop that we represent."

The proposed board of directors of nine will be comprised of three growers of each of the three crops. If growers vote in support of the proposal and subsequently the establishment of a new board is supported by the Commission and ultimately the Ontario Government, one of the key differences between **Berry Growers of Ontario** and the two existing organizations is that membership in the new organization will be mandatory rather than voluntary. Mandatory membership means that every grower of two or more acres of any combination of the three crops will be required to pay membership fees each year based on the number of bearing acres in production. This structure provides a fair and transparent way to fund the activities of the organization. The Commission expects to conduct the vote in late October and early November. Producers must be entered in the Commission's database in order to receive a mailed ballot. Growers that do not currently belong to one of the two existing organizations need to inform the FPMC analyst, Laurinda Lang, right away so that they receive a ballot. Laurinda can be reached during business hours by calling (519) 826-3242. More information is available in

the growers and members section of the OBGA website at <u>http://ontarioberries.com/site/growers-and-</u> <u>members.html</u>. For more information please contact: Jenn VanDeVelde (519) 427-4451 or Steve Kustermans (519) 619-7017. Page 13 of 19 NEW YORK BERRY NEWS VOL. 16 No. 1

Growing Berries for Profit on a Small Scale, Part II

Monday, March 13, 2017 6:30 pm – 8:00 pm

Cornell Cooperative Extension 480 North Main Street Canandaigua, NY 14424

Last year we considered the resources that one would need to get into berry production at a commercial small scale, how one would prepare the site and soil for planting, and how one could market the fruit. This session will address the cultural practices of growing strawberries (both June-bearing and dayneutral types), raspberries (both summer-fruiting and fall-fruiting types) and blueberries. Plant establishment, plant maintenance, pruning and trellising, winter protection and major pests will be addressed. Information provided will be useful to both commercial and backyard producers. Dr. Marvin Pritts, Professor in the Horticulture Section of the School of Integrative Plant Science, Cornell University will be the presenter for this workshop. Growing berries involves high upfront costs and patience but the rewards are great if plants are managed correctly. Attention to detail and willingness to do some physical work, a significant source of income can be generated on as little as ¼ acre.

Fee: \$20/person.

Pre-registration is requested by **Wednesday, March 8, 2017**. Contact 585-394-3977 x 427 or email <u>nea8@cornell.edu</u> with your name, address, and phone number.



Come to Mexico with NARBA!

The North American Raspberry & Blackberry Association (NARBA) is sponsoring a tour of raspberry & blackberry production, **February 21-24**. <u>There may be 1-2 spaces still available.</u>

The tour starts in Guadalajara and visits farms in the Jalisco and Michoacan areas. Aneberries, the Mexican national association of berry exporters, is our host. It will be a great educational and networking opportunity. <u>Click for more information and registration.</u>

The North American Raspberry & Blackberry Association is an organization of growers, both large and small, and of researchers, marketers, and others in the caneberry industry.

Here's what we do:

- Promote delicious and nutritious blackberries and raspberries to the public
- Support production and marketing of raspberries and blackberries through communication, education, and research
- Provide a unified voice to represent the caneberry industry

Please explore the many resources on our website and let us know how we can help you. http://www.raspberryblackberry.com/



North American Raspberry & Blackberry Association

Upcoming Events!

2017 Hudson Valley Commercial Fruit Growers' School: Berry Session: February 16

Best Western Plus Hotel, 503 Washington Avenue, Kingston, NY 12401 Educational Session 1:00 pm - 4:15 pm Registration cost: \$35/person if pre-registered or \$50/person at the door (includes admission into the educational session and lunch).

For more information see Page 17 or https://enych.cce.cornell.edu/event.php?id=475

Come to Mexico with NARBA!: February 21-24

There may be 1-2 spots left! For more information see Page 15 or visit http://www.raspberryblackberry.com/

Protected Culture Winter Regional Workshop: Portland NY: February 28 CLEREL 6592 West Main Road Portland, NY 14769. *Register by February 21*. For more information see Page 10 or visit <u>www.hort.cornell.edu/grower/nybga/</u>

Protected Culture Winter Regional Workshop: Riverhead NY: March 7

CCE Suffolk County Extension Education Center 423 Griffing Ave, Suite 100 Riverhead, NY 11901. Register by February 28. For more information see Page 10 or visit <u>www.hort.cornell.edu/grower/nybga/</u>

Growing Berries for Profit on a Small Scale, Part II: March 13, 6:30 PM- 8:00 PM

CCE Ontario County 480 North Main Street Canandaigua, NY 14424. *Pre-Register by March 8*. For more information see Page 14 or Contact 585-394-3977 x 427 or email <u>nea8@cornell.edu</u> with your name, address, and phone number.

2017 Hudson Valley Commercial Fruit Growers' School

Various sessions are available:

February 14, 2017: Tree Fruit Session 1

February 15, 2017: Tree Fruit Session 2

February 16, 2017: Berry Grower Session

February 16, 2017: Grape Grower Session

February 16, 2017: Berry and Grape Growers Session

Best Western Plus 503 Washington Avenue Kingston, NY 12401

Full agenda: <u>Click HERE to view the Full Fruit Growers' School Agenda</u> Berry Agenda: <u>Click HERE to view the Berry Session Agenda</u>

DEC Credits have been applied for each session.



Cornell University Cornell Cooperative Extension Eastern New York Commercial Horticulture

Changes to the Worker Protection Standard

What are the Major Changes for Farmers and Farmworkers?

The revisions to the Worker Protection Standard cover many different areas. The major revisions include:

- **Annual** mandatory training to inform farmworkers on the required protections afforded to them. *Currently, training is only once every 5 years*.
- Expanded training includes instructions to reduce take-home exposure from pesticides on work clothing and other safety topics.
- **First-time ever minimum age requirement**: Children under 18 are prohibited from handling pesticides.
- Expanded mandatory posting of no-entry signs for the most hazardous pesticides. The signs prohibit entry into pesticide-treated fields until residues decline to a safe level.
- New no-entry application-exclusion zones **up to 100 feet** surrounding pesticide application equipment will protect workers and others from exposure to pesticide overspray.
- Requirement to provide more than one way for farmworkers and their representatives to gain access to pesticide application information and safety data sheets – centrally-posted, or by requesting records.
- Mandatory record-keeping to improve states' ability to follow up on pesticide violations and enforce compliance. Records of application-specific pesticide information, as well as farmworker training, must be kept for two years.
- Anti-retaliation provisions are comparable to Department of Labor's (DOL).
- Changes in personal protective equipment will be consistent with DOL's standards for ensuring respirators are effective, including fit test, medical evaluation and training.
- **Specific amounts of water** to be used for routine washing, emergency eye flushing and other decontamination, including eye wash systems for handlers at pesticide mixing/loading sites.
- Continue the exemption for farm owners and their immediate families with an **expanded** definition of immediate family.

For more detailed information visit: https://www.epa.gov/pesticide-worker-safety/revisions-workerprotection-standard

or email pesticidewebcomments@epa.gov



Using Exclusion Netting to Combat SWD

Dale IIa Riggs, Owner of The Berry Patch and NYSBGA President, along with Dr. Greg Loeb, Professor of Entomology NYS Ag Experiment Station and Laura McDermott, Area Small Fruit Specialist CCE, performed a trial that used insect exclusion netting on an existing bird netting support system to prevent Spotted Wing Drosophila (SWD) infestation.

The project looked at 60 gram insect netting, 80 gram insect netting, and standard bird netting to see its effects on SWD infestation in a commercial mature blueberry planting.

The main objectives of this trial were:

1. Can a knitted mesh netting effectively exclude SWD from a commercial blueberry planting, both in terms of using it under daily commercial activities vs. a small research plot, and in terms of economics? *and*;

2. Can an existing bird netting support system easily be modified to use as a support structure for exclusion netting?

To see the full report please visit the SARE website at <u>http://mysare.sare.org/sare_project/fne14-813/?page=final</u> A report was also written in the NYS Berry Growers Association News, which can be viewed here: <u>http://www.hort.cornell.edu/grower/nybga/newsletter/NYSBGA201610.pdf</u>



Page 19 of 19

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We're on the Web! See us at: http://hort.cals.cornell.edu/ New York Berry News (**NYBN**) is a seasonal commercial berry production newsletter provided by Cornell berry team members. It is designed to help promote and strengthen commercial berry crop production in New York State. NYBN is available free of charge in pdf format at: <u>http://www.fruit.cornell.edu/nybn/</u>.

Visit the NYBN web site to view back issues or to subscribe to monthly e-mail notices with table of contents and a link to the most current issue.

More on individual team members and their areas of expertise may be found at: <u>http://www.fruit.cornell.edu/berry/berryteam.htm</u>.

UPCOMING EVENTS all posted on page 15

Questions or comments about the New York Berry News?

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