FARM & GARDEN



NEWS AND NOTES FOR FARMERS & GARDENERS IN CHEMUNG AND TIOGA COUNTIES

July 2018

News From CCE

By Barb Neal, CCE Tioga

Want to Know What's "Growing On" in Tioga County?

There are lots of ways to learn about classes, workshops, garden information, and more.

- 1. Call the Growline! We will answer your gardening questions. Call 607-687-4020.
- 2. Sign up for the Farm & Garden Newsletter. It comes electronically on the first of the month. The newsletter is packed with great gardening information and workshops you might like. It is free, and we promise you No Spam!
- 3. Like us on Facebook—get up-to-the-minute news about events and cool gardening posts. We post about 4 times a month, so we won't overwhelm you. We'll even let you know how to deal with tough garden issues like when late blight is in our area.
- 4. Check out our Cornell Cooperative Extension of Tioga County website at: tioga.cce.cornell.edu It has a huge amount of gardening, farming and natural resource information.
- 5. Love gardening? This is a great year to become a Master Gardener! We have a blend of at-home study and face-to-face hands-on workshops starting in September. Call Barb at 607-687-4020 or email her at ban1@cornell.edu

Grow lots of Veggies?

If you have extra produce that you cannot eat or give away, consider dropping off your surplus abundance at one of the Harvest Share free veggie stands. The Harvest Share stands accept your bounty and it is free to all who want or need some fresh, healthy food.

The Harvest Share veggie stands are located at the Tioga Rural Ministry (143 North Ave in Owego) and at the Inspire Community Gardens in Spencer (57 East Tioga Street in Spencer). Drop off your veggies day or night and share your abundance! Let's work together to help ease hunger in Tioga County this summer.



Inside this issue:

- Late blight alert!
- Grubs in your lawn
- Buying firewood
- Cornell makes biochar
- Ants in your lawn
- And more!

Barb Neal, CCE Tioga Agriculture and Horticulture Educator, ban1@cornell.edu

Missy Bidwell, CCE Tioga Community Food Systems Educator

mlc52@cornell.edu

Shona Ort, CCE Chemung Ag Development Specialist, sbo6@cornell.edu

Jingjing Yin, CCE Chemung Horticulture Educator, jy578@cornell.edu

Mary Kate Wheeler, SCNY Farm Business, mkw87@cornell.edu

Classes and Workshops in Tioga County

Pesticides and Fertilizers — What you need to know July 5, 6 pm to 7:30 pm When you reach for a pesticide or a fertilizer, do you know how to apply it properly? Join us for this informative class where you will learn how to apply pesticides and fertilizers safely and effectively. We will have some hands-on demonstrations so you get experience with spraying and fertilizing.

Beneficial Insects July 19, 6 pm to 7:30 pm

Did you know there are lots of good bugs that help you keep the bad garden bugs at bay? Learn to identify the good bugs and how to ensure they are present in your garden. We will also discuss how to purchase and release beneficial insects in your garden. We will finish the class with a tour of our gardens looking for these good bugs.

Bulbs in the Garden September 4, 6 pm to

7:30 pm Bulbs are such a welcome sight after a long winter, and the time to plan for this spring burst of color is now. Learn about the different bulbs that you can plant in your garden, how to purchase bulbs, and plant and maintain them. We will finish the class with a hands-on demonstration of bulb planting.

Planting Garlic September 27, 2018 5 pm to 6:30 pm

Garlic is one of the easiest plants to grow and you will love having a supply of home-grown garlic throughout the year. Garlic is planted in



the fall and harvested the following summer. Learn how to plant garlic in this fun, hands-on class. We will plant a bed of garlic in the community gardens next to Tioga Opportunities on Sheldon Guile Boulevard. There is no charge for this class and children are welcome. Meet at the Longmeadow pavilion next to the community garden (9 Sheldon Guile Blvd, Owego)

Note: there is a \$5 per person charge for the classes and classes will meet at the CCE Tioga classroom (unless otherwise noted). Call our offices at 607-687-4020 to register for the classes, or email Barb Neal at ban1@cornell.edu.

Dress: All of these classes have an outdoor component, so please dress for the weather.



For more specific information about the Chemung County Master Gardener program, please contact Jingjing Yin at 607-734-4453 or jy578@cornell.edu.

For more information about the Tioga County Master Gardener program, please contact Barb Neal at 607-687-4020 or ban1@cornell.edu.





AGRICULTURE NEWS

www.agriculture.ny.gov

STATE AGRICULTURE COMMISSIONER URGES HOME GARDENERS, GREENHOUSE GROWERS AND VEGETABLE FARMERS TO WATCH FOR AND REPORT LATE BLIGHT

Devastating Tomato and Potato Disease Detected Early this Season

State Agriculture Commissioner Richard A. Ball today urged New York's home gardeners, greenhouse growers, and vegetable farmers to look for and report any suspicions of late blight in their tomato and potato plants and crops this summer. Late blight is a plant disease that has the potential to cause devastation to these crops, infecting and destroying the leaves, stems, fruits, and tubers of potato and tomato plants. Photos of late blight on potatoes and tomatoes can be found at http://usablight.org/.

Commissioner Ball said, "Late blight is a serious plant disease that can wreak havoc on the State's tomato and potato industry, which ranks high nationally in production. We want home gardeners, greenhouse growers and vegetable farmers to be vigilant and, at the first sign of late blight, report the finding to the Department and a local Cornell Cooperative Extension office so action can be taken as quickly as possible to prevent the spread of this extremely harmful disease."

Late blight was detected in several tomato plants in Onondaga County as a result of an inspection conducted by the Department's Division of Plant Industry, and confirmed this week by Cornell University's Plant isease Diagnostic Clinic. The plants were destroyed in inspectors will continue to monitor field plantings tomatoes. The late blight strain detected was not not be of the known or common strains.

ate blight was first discovered in the United States the early 1840s, devastating crops across the northst. It was also responsible for the Irish potato famme in the mid-nineteenth century.

Growers can identify late blight of potato and tomato by looking for black/brown lesions on leaves and stems. In humid conditions, visible white spores appear. As many lesions accumulate, the entire plant can be destroyed in only a few days after the first lesions are observed. The plant disease thrives in humid, wet conditions and can spread quickly from field to field, and over several miles.

Home gardeners should monitor for late blight as it can be transferred from the home garden to commercial operations. If home gardeners observe tomato plants with late blight symptoms, the Department urges them to contact their local Cornell Cooperative Extension (CCE) for assistance. It is important not to compost any diseased plant material.

Editor's note: Every week, I update the Late Blight page on our website. Check regularly to learn whether late blight is in your area. You can always call our CCE offices to learn how to manage this disease.

http://tioga.cce.cornell.edu/gardening/pests-ipm/late-blight-update



(continued on next page)

Greenhouse growers should contact the Department's Division of Plant Industry at 518-457-2087 if late blight is suspected. In addition, commercial vegetable growers should survey their tomato and potato fields for late blight and watch the blight forecast, which predicts disease incidence and directs growers to apply fungicides to protect

plants. A map of current locations of late blight outbreaks can be found at http://usablight.org. The blight forecast can be found at: http:// newa.cornell.edu/ index.php?page=potatolate-blight-dss.

If a commercial vegetable grower suspects late blight on their crops, they should work with a local CCE office or regional vegetable specialist, who can help commercial growers select the appropriate fungicide to treat the crops. Vegetable

growers manage late blight."

said, "Cornell is working as quickly as possible to learn

more about the strain of the pathogen identified here in

New York. We are glad to partner with the NYS Depart-

ment of Agriculture and Markets to help potato and tomato

growers should employ standard late blight management procedures. Because we do not know if the strain detected is sensitive to fungicides containing mefenoxam, growers should use fungicides with other active ingredients and should be certain to rotate chemistries. Organic growers

Dr. Christine Smart, Professor of Vegetable Pathology and Director of the School of Integrative Plant Science, College of Agriculture and Life Sciences, Cornell University,

will want a product with copper.

Attention Berry Growers!

Cornell has begun issuing the first of the season's Spotted Wing Drosophila (SWD) alerts. Numbers are still low, but will be increasing as female flies arrive and strawberries fruit and ripen. Be vigilant in your trap and fruit monitoring, weeding, and irrigation/drainage, and employ a spraying routine that works with your picking schedule. A list of insecticides can be found here. (note: some of the insecticides listed in this table are restricted use chemicals.)

Also, CCE Tioga and CCE Chemung will provide berry growers with updates on SWD and other berry growing issues. Contact either Barb Neal or Shona Ort to get on the email list.



Buying Firewood

You've bought the most efficient wood stove available or done a complete maintenance check of your old stove and replaced worn-out parts. You've cleaned out your chimney. You've read your owner's manual and know your stove's ins and outs and the best way to operate it. You vow to burn only dry, seasoned wood. The temperatures outside are beginning to drop and you're ready to sit in front of a roaring fire. So, where can you get some firewood?

The start of the heating season is not the time to buy firewood. Most firewood dealers sell green, or freshly cut, wood, which could have a moisture content of 100% or more (100% moisture content means half the weight of the wood is water). In many areas, you can buy seasoned or kiln-dried wood, but you'll pay a premium for it. It's important to burn only wood with moisture content below 20%. Burning wood with higher moisture content creates more smoke, which contains harmful chemicals and particulates and forms creosote on your chimney. It also gives you less heat, because it takes energy to boil off the excess water. That means wasted money.

It's a good idea to buy your wood at least one whole season ahead. If properly stacked, in an area of relatively low relative humidity, many species of wood will drop to a moisture content below 20% within a year; some species, such as oak, however, can take two years or more of air drying. By purchasing your firewood at least a year ahead of time, you'll be working with firewood that's been seasoned to some extent and you will be closer to always having dry wood at your fingertips.

Before purchasing firewood, it's a good idea to do some background research. Ask other people who burn wood where they've been getting their firewood from and if they've been happy with it. Then call around to different dealers and ask them some questions, including how long ago was the wood split and how was it stored before it was split, what kind of wood is it, where were the trees taken from and what kinds of forest management practices did the loggers practice, and find out if it's competitively priced for your area. Finally, ask them if you can go see where the wood is stored that they'll be delivering or make available for pickup. If they brush you

off or won't let you out to their site, you may want to try someone else. Due to liability concerns, firewood dealers probably won't let you wander around their yards by yourself or climb on the wood piles, but they should be open about their operations. Note that many firewood dealers cut wood as a second job, so allow them ample time to respond.

In many areas, it is illegal to move firewood from one area to another, because of the threat of spreading invasive insects that are destroying certain types of trees (for more information, see the links on the left). In New York State, the limit is 50 miles. So, make sure your firewood dealer is getting his wood from less than 50 miles away and never transport the wood further yourself, not even for camping trips.

In New York State, when advertising firewood, dealers are also legally required to adhere to the following:

- A full cord is defined as a stack of firewood measuring 4ft x 8ft x 4ft
- A half cord = 4ft x 8ft x 2ft
- A third of a cord = 4ft x 8ft x 16in
- A face $cord = 4ft \times 8ft \times 16 \text{ or } 18in$
- A rack = 4ft x 8ft x 18in
- A truckload = 9ft x 9ft x 3ft
- If the word "seasoned" is used in advertising firewood, the dealer must specify how long it has been seasoned and whether it was air or kiln dried.

Heating with Wood resources developed by Guillermo



DON'T MAKE A MOUNTAIN OUT OF AN ANT HILL – WHY ANTS IN YOUR LAWN MAY NOT BE A PROBLEM

Written by Amara Dunn, in her Biocontrol Blog, https://blogs.cornell.edu/biocontrolbytes/



Ant hill built at the entrance to the nest. Cornfield ants (Lasius neoniger) prefer sunny areas with short and sparse grass. Photo courtesy of Matt Frye, NYS IPM.

Now that the weather is getting warmer and you're spending more time outside, you might notice ant hills in your lawn. Reaching for a can of something that will kill them should not be your first move! These ants may be cornfield ants (known among scientists as Lasius neoniger). They are yellowish brown to dark brown, and about 1/8 of an inch long (or slightly longer). You are most likely to notice the ant hills they produce at the entrance to their underground nest in a sunny lawn where the grass is short and sparse (since this is their preferred nesting area). While the ant hills could be problematic on parts of a golf course where the grass must be kept very short, they aren't big enough to be a problem in your backyard (if you're mowing your grass to the correct height, which should be about 3.5 inches).

In addition to being harmless to humans – they don't sting or bite – these ants are actually good for your lawn! They eat the eggs of grass pests, including Japanese beetles. One study found that when these ants were present in turf grass, they reduced the numbers of white grubs and other grass pest larvae. Choosing not to apply pesticides to kill these ants will help you practice conservation biocontrol in your own backyard! In other words, by protecting the natural enemies of lawn pests, you will have fewer lawn pests (and less damage) to worry about.



Ants entering and exiting their nest. Cornfield ants (Lasius neoniger) are about 1/8 inch long, and range from light to dark brown. Consult an expert for correct identification. Photo courtesy of Matt Frye, NYS IPM.

Although these cornfield ants should be a welcome addition to your lawn for the reasons I've just described, if the hills they create are bothering you, there are some simple IPM solutions. Water and fertilize your lawn appropriately and use one of the top two height settings on your mower when cutting your grass. These strategies will help you achieve a denser, taller lawn. This type of lawn is less desirable for building new ant nests, and will make remaining ant hills less noticeable. For more information on maintaining healthy lawns, see the Cornell Turfgrass program's Lawn Care: The Easiest Steps to an Attractive Environmental Asset.

A few final (but important) notes. Cornfield ants in your yard are a good thing. Ants in your home are a different story entirely, and NYS IPM has information on how to avoid in-home ant problems. If you are uncertain about what type of ant you have, consult an expert for proper identification. Your local extension office is a great place to start. Or, you can submit a sample to the Cornell Insect Diagnostic Laboratory.

New "Better Know a Pest: Flea Beetles" Video

Cornell Vegetable Program's new video suggests integrative approaches for defending against flea beetle crop damage.

Click here to view the video.



Grass is always greener in the next yard

How do you know if grubs are the problem, or if it's something else?

By Paul Hetzler, CCE St. Lawrence

The Memorial Day long weekend is often a time to put in the garden, spruce up the yard, and of course, mow the lawn. After the snow from our prolonged winter melted away, many homeowners were disappointed at the condition of their lawn. Areas of dead grass are sometimes, but by no means always, due to heavy feeding by last fall's grub crop. Grubs, of course, are beetle babies. Not like Ringo Junior, but the larval stage of European and rose chafers, and Japanese, Asiatic-garden, and Oriental beetles.

Unfortunately, you will have to wait until late summer to exact revenge, because short of becoming a skunk-herder and letting your flock dig up all the grubs, absolutely nothing you do to right now will kill the grubs responsible for vandalizing your lawn. Or kill any grubs for that matter. They are done feeding and are in the pupal stage, essentially impervious to poisons.

How do you know if grubs are the problem, or if it's something else? At this time of year it is hard to tell. One fairly reliable sign of grubs are pockmarks in the yard from crows and skunks grubbing around for snacks. The best time to scout for grubs is in mid-August. Measure out a square-foot patch of lawn and cut the edges with a flat-

bottom shovel. The turf will peel back like a carpet, or maybe a sticky carpet, and you'll be able to look under the hood of your lawn. If there are more than ten grubs in your sample, it may be worth treating the yard.

Assuming treatment is in order, you'll have to pick your poison, literally. A very important fact to consider is that pesticides available at garden centers are not less toxic than ones restricted to licensed applicators. There are other reasons for restrictions, such as the need to understand how to combine products together depending on site conditions or weather. The active ingredients in so-called "24-hour" grub treatments are breathtakingly toxic. Take trichlorfon, a popular component of such formulations, for example. Here is an excerpt from a fact sheet from the Extension Toxicology Network, a pesticide information project of Cooperative Extension Offices of Cornell University, Michigan State University, Oregon State University, and University of California at Davis:

"As with all organophosphates, trichlorfon is readily absorbed through the skin. The organophosphate insecticides are cholinesterase inhibitors. They are highly toxic by all routes of exposure. Some organophosphates, including trichlorfon, may cause delayed symptoms beginning 1 to 4 weeks after an exposure which may or may not have produced immediate symptoms. ...effects reported include impaired memory and concentration, disorientation, severe depressions, irritability, confusion, headache, speech difficulties, delayed reaction times, nightmares, sleepwalking and drowsiness or insomnia. ...headache, nausea, weakness, loss of appetite, and malaise has also been reported. Improvement may occur over months or years, but some residual impairment may remain."



Above all else, the best defense against grubs is to mow high, between 3.5 and 4 inches, no shorter, and to leave the clippings on the lawn. This makes the grass strong enough to withstand grub feeding without dying off in the spring. (Erich Ferdinand, Flickr/Creative Commons)

Maybe it's just me, but this seems like a rather high price to pay for a greener lawn. Other formulations are not as dangerous as trichlorfon, but caution is still in order. A very popular active ingredient in grub-killers is imidacloprid, one of the neonicotinoids which were just banned throughout Europe because of the risk they pose to bees and other pollinators. I'm not allowed to say our bees are at risk from imidacloprid, however. It's possible our bees are different from those in Europe. Im-

idacloprid needs to be applied about 30 days before the onslaught of grubs in late July and August.

And names can be deceiving. Chlorantraniliprole is a recent addition to the anti-grub arsenal, and in spite of its

Continued on the next page

intimidating name, it is one of the least toxic chemicals. The issue is that it must be applied about 60 days prior to grubageddon. Then there are worms. Beneficial nematodes to be exact. These microscopic roundworms invade a grub's body, reproduce inside and finally burst from the hollow grub carcass. Yum. Nematodes are completely nontoxic and work very well, but are more expensive than most chemicals. Since they are live, they must be direct-shipped and handled with care.

Above all else, the best defense against grubs is to mow high, between 3.5 and 4 inches, no shorter, and to leave the clippings on the lawn. This makes the grass strong enough to withstand grub feeding without dying off in the spring. After the second year, higher mowing greatly reduces and often eliminates most weeds from the lawn, and it significantly cuts the need for fertilizer. Try it.

For more information on lawn care, call your local Cooperative Extension office, or visit https://turf.cals.cornell.edu/lawn/lawn-care-the-easiest-steps-to-an-attractive-environmental-asset/

If anyone has success with skunk-herding, please let me know.



Planting at the new Open Door Mission community garden in Owego, NY. Seed to Supper Gardens throughout Tioga County have been planted and we all look forward to the harvest.



Don't Get Ticked!

Ticks and tick-borne diseases have become a significant public health issue in New York, with different tick species and diseases currently present and spreading within the state and region.

More ticks in more places also increases your risk of tick encounters. Changes in land use such as construction of new neighborhoods and shopping centers leave small patches of wooded areas, and these are great habitat for deer and mice. More hosts means more ticks! In addition, a warming climate expands the areas and seasons where ticks actively feed and reproduce.

Check out this great website on avoiding ticks and preventing tick bites:

https://nysipm.cornell.edu/whats-bugging-you/ticks/



2018 Tioga County NY Farmers' Markets BUY LOCAL

Owego, NY*

Tuesdays & Fridays - 9:00 AM to 1:00 PM
RiteAid Parking Lot, Main Street & Central Ave
June 12 to October 30
John Purdy 607-642-8439 bradenson@msn.com

Candor, NY

Thursdays - 3:30 to 6:30 PM
Candor Town Hall, Route 96
June 14 to September 27
Carol Murphree carol.murphree@gmail.com

Spencer, NY*

Saturdays - 9:00 AM to 12:30 PM Nicholas Park on Route 34, Spencer June 2 to September 29, rain or shine Stephanie Hafl 607-589-7496 hafls@yahoo.com

For more information about Farmers' Markets, Agriculture, Gardening, and Nutrition contact: Cornell Cooperative Extension Tioga County 607-687-4020 56 Main Street, Owego, NY 13827 http://tioga.cce.cornell.edu/

Some markets in Tioga County have vendors who accept SNAP (EBT) benefits and participate in the Farmers' Market Nutrition Program (FMNP) which provides coupons for WIC recipients and seniors over age sixty. Updated April 3, 2018

*No EBT available at these markets





Taste the Freshness!

When you purchase local foods you enjoy some of the freshest, best-tasting foods available. Plus, when you buy locally you support the local economy and help keep land in agriculture.

Many markets accept FMNP, WIC, senior coupons, and Just Say Yes.



Shopping Tips:

- Arrive early for best selection.
- · Bring a re-useable shopping bag.
- Bring cash, WIC checks, senior and/or FMNP coupons. Most vendors don't accept credit cards.
- If you are out for the day, bring a cooler.
- Talk to farmers to learn about their farm and their growing practices.
- Tell the vendors what you like and what you are looking for.
- · Try different varieties and recipes.

Cornell Cooperative Extension

Tioga County tioga.cce.cornell.edu 607-687-4020



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Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and that provides equal program and employment opportunities.

New Pyrolysis Kiln Opens at Cornell

By Blaine Friedlander Cornell Chronicle

June 11, 2018



Waste could soon become a precious gem as Cornell's new pyrolysis kiln – the largest of its kind at a U.S. university – opened May 24 at a celebration

in the Leland Laboratory on campus. Scientists and engineers will investigate the potential for energy production from the gases, make new biomaterials and create Earth-friendly biochar.

"We're excited to start a new chapter in interdisciplinary research leveraged by this unique facility. It connects bio-energy with soil science, agriculture, energy storage and waste management," Johannes Lehmann, professor of soil science and a fellow at Cornell's Atkinson Center for a Sustainable Future, said at the opening.

"This pyrolysis unit is one of the most sophisticated slowpyrolysis units in any institution worldwide," Lehmann said. "It has unique capabilities that allow high versatility and continuous monitoring. I would call it the Rolls Royce of pyrolysis units."

The kiln was designed and built by Full Circle Biochar, a California-based company eager to demonstrate the economic feasibility of eco-friendly, biomass-based materials. Full Circle Biochar is working in close collaboration with Cornell on biochar research and development.

Cornell's pyrolysis kiln project began in 2010 when philanthropist Yossie Hollander and his family made a \$5 million gift to the Cornell Center for a Sustainable Future – predecessor to the Atkinson Center – to advance biofuel technology for developing countries.

The new kiln is classified as a demonstration unit and it is larger than regular, small-sample university kilns. "The results are much more commercially representative. You can translate these results into larger units," said kiln designer Cordner Peacocke, owner of C.A.R.E. Ltd., a bioenergy and waste to energy engineering firm in Northern Ireland.

The designer said Cornell's new kiln is flexible. "You can add more heat at the start, rather than at the end to improve drying, if required, as the greatest thermal demand for pyrolysis is at the start. Or you can vary the temperature along the kiln and have higher temperatures at the end if you want to anneal your char and reduce volatiles," Peacocke said. "You can tilt the kiln to vary the residence time of the solids. You can feed various particle sizes and shapes. From a research perspective, there are several parameters you can easily change and the final char product would be commercially applicable."

Materials can be fed into the kiln continuously – for up to four hours before a hopper refill is needed – and it is very controllable. The kiln can handle up to 120 pounds of wood chip an hour and reach up to 600 degrees Celsius.

"This kiln is small enough to be flexible to meet the needs of product development, but big enough to be relevant to scale up research," said John Gaunt, adjunct associate professor in plant sciences and a partner in the project.

"One of the fascinating things about the equipment is the product intersects with our life in so many different ways," said Gaunt, also an Atkinson Center fellow. "There are so many points of intersection – everything from agriculture to energy to construction materials to animal feed. We can produce samples from our research that we can scale into processes for a commercial operation. It's really quite amazing."

News, Notes and Workshops for Tioga and Chemung County Farmers and Gardeners

Bees in the Trees Workshop Woody Perennials for Wild Pollinators with Kass Urban-Mead, Groundswell Center Incubator Farm Saturday July 7th, 10AM - 1PM Sliding Scale \$15-\$30, no one turned away

Language Interpretation and Childcare for All Workshops Available Upon Request

Groundswell Center for Local Food and Farming supports individuals as they develop agricultural skills and grow profitable, equitable and ecologically-sound farm businesses. We prioritize support for underrepresented producers including people of color, refugees, women and individuals with limited resources.

The Master Forest Owner (MFO) volunteer program continues to expand and build on its success as a premier peer-to-peer woodland owner support network. Over the past year we have expanded support to volunteers, improved monitoring of woodland owner needs and requests, and streamline documentation for impacts. We need your

Safety Videos for New Dairy Workers

The New York Center for Agricultural Medicine and Health (NYCAMH) is promoting a series of on-boarding safety training videos for new dairy workers. These free videos were created by the High Plains Intermountain Center for Agricultural Health & Safety (HICAHS) and are a valuable resource for dairy farmers looking to train new workers quickly and efficiently about safety from day one of employment. These videos are available for free on the HICAHS website, the NYCAMH website and on the U.S. Agricultural Safety and Health Centers YouTube Channel. All videos are narrated in English and Spanish. Pre and post tests are also available, to assess workers knowledge of the safety concepts described in the videos.

assistance to identify woodland owners to serve as candidates for the training of new volunteers. Please identify 1 or 2 woodland owners that are sincerely interested in sustainable woodland management and who we can train to help them spread the word about woodland management resources.

MFO volunteers do not offer technical assistance, perform Nutrient Cycling in Pastures management activities, or give professional advice. Rather, they meet with owners to listen to their woodland goals, concerns and questions; volunteers then offer sources of assistance, and encourage them to work with professionals. The success of this program is grounded in the power of approximately 150 peer woodland counselors.

Volunteers can be from any background, young or old, resident or absentee, large or small parcels, with varied woodland experiences. Candidates receive a bit of forest management training, but the program is primarily designed to help them develop as volunteers for peer-to-peer counseling to encourage sustainable woodland management.

The 2018 training will be September 26-29 at the Cornell University Arnot Teaching and Research Forest in Van Etten, NY (www.arnotforest.info). The \$125 (\$200 per couples) fee helps defray the cost of publications, food, and equipment for the 4-day training. Volunteers may stay at the Arnot at no additional cost. The training combines classroom and outdoor field experiences on a variety of woodland management and educational topics.

To learn more about the MFO program, check out the website at: http://blogs.cornell.edu/ccemfo/

Veteran in New York? Farming?

The Cornell Small Farms Program would like to remind Veterans in New York that scholarships are available to attend workshops and online courses through our 'Farm' Ops' Program. 'Farm Ops' also offers intensive trainings and regional networking opportunities. To receive news about specific opportunities, sign up for our Veterans-in-Ag Listserve or contact Project Manager Dean Koyanagi. Learn more about the project by clicking here.

Registration Now Open for First Annual NYS Soil Summit

The first New York Soil Summit, organized by the New York Soil Health project, is for farmers, researchers, agriculture service providers, government agencies, non-profits and policymakers interested in advancing



soil health efforts across the state. The summit is Wednesday, July 18. Topics include: local experts/grower panel, research and policies relevant to soil health, and Soil Health Roadmap breakout sessions. Registration, summit agenda, and other details can be found here. More information about the project can be found here.

This publication looks at the pathways and drivers that move nutrients into, out of, and within pasture systems. It attempts to provide a clear, holistic understanding of how nutrients cycle through pastures and what the producer can do to enhance the processes to create productive, regenerative, and resilient farm and ranch systems. Effective management of nutrient cycling in pastures is simply understanding how nature cycles nutrients in natural grasslands and then mimicking those processes.

Access the publication for free here.

Beekeeping: Considerations for the Ecological Beekeeper

This presentation is targeted toward novice and intermediate level beekeepers, beekeepers located in areas with regular pesticide use and/or farmers that would like to save on the cost of migratory pollination. Topics include the greatest challenges facing today's beekeeper, avoiding the downward spiral that may lead to colony death, IPM and sustainable management, and requirements for good bee health. Access the presentation here under "Popular and **Updated Publications."**

How to Get Bed Bugs Out of Your Belongings

Dealing with a bed bug problem at home can force people into a difficult decision: keep a potentially infested item or throw it away? This new guide from the New York State IPM Program offers a solution to that dilemma. *How to* Get Bed Bugs Out of Your Belongings describes proven bed bug management techniques that are available to homeowners, and provides specific recommendations for removing bugs from personal items. This guide is a useful reference for extension agents, Master Gardener Volunteers, social workers, health departments, Healthy Homes workers, and others that help people faced with bed bug infestations. Pest management professionals will find this a helpful tool when communicating with customers who have home infestations.

