

# FARM & GARDEN



Cornell University  
Cooperative Extension  
Chemung & Tioga Counties

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

June 2018

### News From CCE

*By Barb Neal, CCE Tioga*

“Summer Time, and the living is easy....” Certainly George Gershwin can write a beautiful song, but if you are a farmer or a gardener in the Southern Tier, those lyrics don’t often apply to us—we are too busy with our work! Between haying, weeding, harvesting, beekeeping and other summer activities, it can seem like summer goes by at light speed.

Another summer time experience is coming up to a tractor driving along our country roads, as the farmer transports equipment from field to field. Take the time to read the tips for driving with slow moving vehicles. In addition, there are several new Amish families in Tioga County, so be on the lookout for their horse and buggies on the road. Check out the driving tips on page 11.

There are a lot of events coming up this summer—between Sundaes at the Farm (July 29th) to the Tioga County Fair (August 7—11) and the Chemung County Fair (July 31—August 5). Take some time out of your busy schedule to visit these fun events!

Want to do something that helps our local agriculture industry? Visit a farmers’ market! Get to know the folks who grow your food—and what wonderful food it is: fresh, local, and delicious. If you don’t know where your closest market is, contact your CCE office and we will help you learn about the farmers’ markets in your area.

### Annual Tioga County Master Gardeners’ Plant Sale is June 2nd!

Gardeners in Tioga County and beyond know that the annual plant sale is not to be missed! Wonderful perennials, helpful volunteers and great prices make this sale a must for gardeners!

When: **June 2nd from 8 am to noon**—arrive when we open for the best selection—our busiest hour is 8 am to 9 am!

Where: 56 Main Street in Owego

Why: supports the Master Gardener Volunteer Program

**Held Rain or Shine!**



### Inside this issue:

- Share the road with farmers
- Dealing with nuisance wildlife
- Eating weeds!
- Dragons and Damsels
- Current research on crops and hard cider
- Engelbert Farm
- WPS update
- And more!

Barb Neal, CCE Tioga Agriculture and Horticulture Educator, [ban1@cornell.edu](mailto:ban1@cornell.edu)

Missy Bidwell, CCE Tioga Community Food Systems Educator

[mlc52@cornell.edu](mailto:mlc52@cornell.edu)

Shona Ort, CCE Chemung Ag Development Specialist, [sbo6@cornell.edu](mailto:sbo6@cornell.edu)

Jingjing Yin, CCE Chemung Horticulture Educator, [jy578@cornell.edu](mailto:jy578@cornell.edu)

**Workshop: Learn about Vermicomposting (worm composting)**

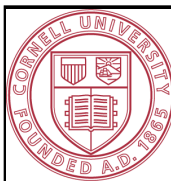
**June 14, 2018; 6:30 – 7:30 PM.** Do you have kitchen scraps and yard debris that you don't know what to do with? Would you like natural, home-made compost for your garden? Worm compost is considered an especially good soil amendment and nutrient source for your garden. In this one-hour workshop, Chemung County Master Gardener, Peg Weidemann, is going to talk about how to turn your yard and kitchen waste into valuable soil amendment with the help of worms.

**Speaker:** Peg Weidemann, Chemung County Master Gardener

**Place:** Steele Memorial Library (large conference room), 101 E Church Street, Elmira, NY

**Workshop fee:** Free, but a \$3 suggested donation helps support our Horticulture Program.

Please register with CCE Chemung at 607-734-4453, or [jj578@cornell.edu](mailto:jj578@cornell.edu).



**Cornell University  
Cooperative Extension  
Tioga County**

Check out pages 4 and 5 for a list of workshops for Tioga County—there is a lot coming up this year!



## Damsels and Dragons

*By Paul Hetzler (slight edits for 2018)*

A nonfiction essay about damsels and dragons sounds like a contradiction in terms, or at the very least like a stale gender stereotype. But dragons are real. Damsels, while appropriately slender and elegant, and garbed in bright colors, are not the shrinking violets of fairy tales. They are every inch the airborne flesh-eaters that their chunky dragon cousins are.

If you're out on a mild September day you may see large numbers of dragonflies and damselflies—shiny red, green or blue jewels—darting about. It's a treat to watch them snap up insects and, more impressively, mate in mid-air.

Dragonflies and damselflies are carnivorous insects in the order Odonata. Dragonflies are in the sub-order Anisoptera, a term meaning not (an) the same (iso) wings (ptera). Their front pair of wings are longer than hind pair, which is one way to tell them from damselflies, which are in the sub-order Zygoptera in case you were wondering. There are an estimated 6,000 Odonata species in the world, nearly 200 of which have been identified in New York State.

Dragonflies, powerful fliers, can be so large they can look like a bird at first glance. When resting they keep their wings outstretched; a line of them basking on a log seem like small planes waiting to take off. I've

been told it's good luck if one lands on you. Probably the "luck" is that they repel deer and black flies.

Damselflies are much more slender than dragonflies. In damsel-like fashion, they fold their wings primly along their bodies. And while many dragons are colorful, damsels outshine them with bright, iridescent "gowns." Damselflies are sometimes called darning needles, and even the official literature lists such damselfly names as "variable dancer" and other descriptive titles.

Both kinds of insects are beneficial in that they eat plenty of black flies, deer flies, mosquitoes and other biting insects. Not surprisingly, they breed in the same habitats as their prey. Damsels and dragons lay their

Damselfly image from Wikipedia—article continues on page 7.



For more specific information about the Chemung County Master Gardener program, please contact Jingjing Yin at 607-734-4453 or [jy578@cornell.edu](mailto: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](mailto:ban1@cornell.edu).



## Weeds? If you can't beat them, eat them!

*By Ken Wida, Chemung County Master Gardener*

**With any edible wild plant don't eat it unless you are positive of its identification. Be sure it has not been exposed to chemical sprays or pollution, especially if it is alongside the road.**

There are many wild plants that our ancestors used as food that have all but been forgotten today. I remember my Grandmother cooking with Dandelion leaves when I was a youngster. Some of the plants that are called weeds today have more nutritional value than foods we buy in the store. Let's take a look at a few of the most common plants that could serve as free food.

### Lambs Quarters

The leaves and stems are edible and delicious. They have a flavor similar to spinach or chard. If you enjoy leafy greens such as kale, collards, and spinach, you will like lambs quarter. The easiest way to cook lambs quarter is to simply steam the leaves and stems in a small amount of water until tender. The greens cook quickly and turn a dark green color as they shrink down during cooking.

### Purslane

This plant is often be found in moist garden beds, lawns, and shady areas, where it lies close to the ground and often goes unnoticed. This humble garden weed, however, is a nutritional powerhouse; it contains more omega-3 fatty acids than any other leafy vegetable, and can be a great addition to a salad or stir-fry, or used to thicken soups or stews. Purslane is a succulent, with a crispy texture, and the leaves and stems can be eaten raw or cooked to add a peppery flavor to any dish.

### Red Clover

This common lawn weed goes mostly unnoticed, but is an important food for honeybees and bumblebees. The leaves and flowers can add variety to meals. Small amounts of raw leaves can be chopped into salads or sautéed and added to dishes. The flowers of

both red and white clover can be eaten raw or cooked, or dried for tea.

### Plantain

A common lawn weed that is not only a great medicinal plant that can be used topically to soothe burns, stings, rashes, and wounds, but is also a great edible green for the table. The young leaves of plantain can be eaten raw, steamed, boiled, or sautéed, and while the older leaves can be a bit tough, they can be cooked and eaten as well. The seeds of the plantain, which are produced on a distinctive flower spike, can be cooked like a grain or ground into a flour

### Dandelion

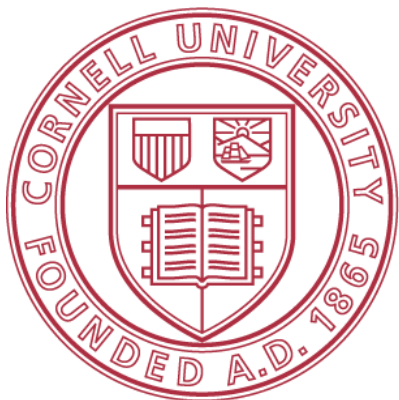
Dandelion leaves can be harvested at any point in the growing season, and while the smaller leaves are less bitter and more palatable raw. If raw dandelion leaves don't appeal to you, they can also be steamed or added to a stir-fry or soup, which can make them taste less bitter. The flowers are sweet and crunchy, and can be eaten raw, or breaded and fried, or even used to make dandelion wine. The root of the dandelion can be dried and roasted and used as a coffee substitute, or added to

any recipe that calls for root vegetables.



This image of lambsquarter is from the Cornell Weed Ecology and Management Laboratory <https://weedecology.css.cornell.edu/images/weeds/Chenopodium-album-seedling.jpg>





# Cornell University

## Cooperative Extension

### Tioga County

**Great Lawns and Easy, Breezy Gardening June 14, 6 pm to 7:30 pm** Are you a novice gardener? Join us to learn how to have a great looking lawn with a minimum of pesticides. We will also share super tips you can use to make your garden look fabulous without a lot of work.

**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](mailto:ban1@cornell.edu).

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

Cornell Cooperative Extension  
Tioga County

# Invasive Species Workshop



JOIN, NY Natural Heritage Program, Tioga County Soil and Water, and Tioga CCE as we co-host an informational workshop on Invasive Species.

WEDNESDAY, JUNE 6th, 2018 5:30pm-8pm

Hubbard Auditorium, 56 Main St. Owego, NY 13827

To register: FREE, just email Missy Bidwell:  
[mlc52@cornell.edu](mailto:mlc52@cornell.edu)

First & Last Name

**Registration; 5:30PM-6:00PM**

**Introductions 6pm Missy Bidwell**

**Emerald Ash Borer update Mike Jones**

**Hydrilla Alex Marks**

**Hemlock Woolly Adelgid update Charlotte Malmborg**

**iMapInvasives; mobile app demonstration Brittney Rogers**



*Helping You Put Knowledge To Work*

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.

# LEGAL FRAMEWORK FOR NUISANCE WILDLIFE CONTROL IN NEW YORK STATE

By Lynn Braband, NYS Community IPM Program at Cornell University, 2014

*Editor's note: We at CCE get a lot of queries about nuisance animals. Here is an article about the legality of taking or relocating animals. Read to be sure that you are complying with DEC regulations.*

The major regulatory agencies for wild vertebrates in New York are the NYS Department of Environmental Conservation (all species) and the U.S. Fish and Wildlife Service (migratory birds and federally endangered species). Every species of wild vertebrate in the state has a legal classification. The classification categories, of most relevance to vertebrate pest management, are “unprotected” and “protected.”

An “unprotected” species can legally be taken by the property owner at any time of the year and by any means as long as other laws (i.e., pesticide regulations, firearm discharge ordinances, trespassing laws, etc.) are not violated. However, without a permit, the property owner cannot release the animal off his/her property. The animal must be destroyed and buried or cremated. An “unprotected” animal could also be released on the same property where it was captured. “Unprotected” mammals include shrews, moles, bats (except Indiana bat, which is federally protected), chipmunk, woodchuck, red squirrel, flying squirrels, voles, mice, and Norway rat. The rock pigeon (feral pigeon), house sparrow, and European starling are “unprotected” bird species.

There are two subcategories of “protected” species. For some “protected” mammal species, if an individual animal is causing damage (not merely being a nuisance), it can be captured and/or destroyed by the property owner. Mammalian species, which are classified under this category, include opossum, raccoon, weasels, skunk, and gray squirrel. However, the animal (dead or alive) cannot be transported off the landowner's property without a nuisance wildlife control permit. Exceptions would be animals that are taken during a legal hunting or fur trapping season established for that species if the appropriate hunting or trapping license has been obtained. Another exception is that skunks may legally be taken if only a nuisance (not causing damage).

Nuisance wildlife control permits are issued to individuals who have gone through the prescribed application process. These permits allow the removal of the aforementioned “protected” animals in any number, at any time, and from any location (with permission of the landowner) within the state. Individuals who have obtained a permit, which must be renewed annually, include private nuisance wildlife control operators, many pest control operators, municipal animal control officers, and some wildlife rehabilitators.

A few mammals (including bear, beaver, deer, mink, and

muskrat), most birds, and (currently) all reptiles and amphibians are not only “protected” but cannot be captured and/or removed from property without special case-by-case permits.



Gardeners and farmers alike battle woodchucks (groundhogs) every year. Read the article to learn what you can do (and not do) with pesky critters. Photo from Maine.gov website.

## Landscapes surrounding farms affect insect pests, crop yields, study finds

By [Krishna Ramanujan](#) | *Cornell Chronicle*, April 18, 2018

Landscapes that surround agricultural lands strongly influence the dynamics of beneficial insects as well as insect pests on farms, which in turn affect crop yields.

Such were the findings of a Cornell study of New York farmlands, published April 4 in the journal *Ecological Applications*.

Many previous studies on how landscapes surrounding farms affect insect pests and crops have only considered one pest at a time. This study examined the effects of three cabbage pests – aphids, flea beetles and leaf-feeding caterpillars – wasps that feed on caterpillars, and crop yields. It also looked at three different types of landscapes that surround farms: agricultural lands, meadows and semi-natural areas (including shrublands, types of forests and woody wetlands).

“By considering multiple insect pests, [our study design]



represented a more realistic situation for what farmers experience, we were able to disentangle some of these complexities,” said Ricardo Perez-Alvarez, the paper’s first author and a graduate student in the lab of Katja Poveda, professor of entomology and the paper’s senior author.

In the study, the researchers set up 22 experimental cabbage plots on farms across the Finger Lakes region of New York from June to September in 2014 and 2015. The details and management of each plot were the same, with no pesticides or insecticides used. Throughout the growing season, the researchers measured plant damage by each pest, density and abundance of parasitoid wasps, and they recorded crop yields at the end of each season.

The researchers expected that landscapes with a higher proportion of cropland and lower habitat diversity would lead to more specialist pests and a reduction in crop yields, according to the paper. Instead, they found that yields and the number of pests were best explained by the presence of non-crop habitats, such as meadows, in the landscape.

Specifically, when the proportion of meadows surrounding farms was high, the amount of infestation from cabbage leaf-eating caterpillars was lower, likely because of increased parasitism from wasps. On the other hand, these same plots experienced more infestation from flea beetles and aphids. The findings suggest that while some beneficial insects increased as a result of the non-crop habitats, so did the number of certain pests.

By considering the collective effect of multiple pest species on crop yields, management schemes need to consider joint effects of pest species to be effective, Perez-Alvarez said. Still, more detailed study is needed to better understand these dynamics. “There were some landscapes where the presence of meadows can have an overall positive effect from crop production, but in other areas, meadows can have a negative effect,” he said, perhaps due to the characteristics of the insect fauna that live in those areas.

“There is not a universal solution,” he added.

Brian Nault, professor of entomology, is a co-author of the study. The study was supported by U.S. Department of Agriculture’s National Institute of Food and Agriculture via the Cornell University Agricultural Experiment Station.



Graduate student Ricardo Perez-Alvarez checks cabbage plants for insect pests.

## eggs right in the water or on vegetation along streams, Continued from page 2—Damselflies and Dragonflies

rivers or ponds.

The nymphs (immature stages) are monster-like with little resemblance to adults. You can get a sense of what their choppers look like if you watch the movie *Alien*. Seriously, when magnified you can see their primary jaws (actually labia, but they act like jaws) open to reveal a second or even third set of hinged jaws (palps, technically). Depending on the species, nymphs get pretty big—the family Tanytarsidae produce juveniles the width of your hand.

Damsels and dragons spend most of their lives—between one and three years—underwater. Even as youngsters they put a dent in the pest population, gobbling soft grub-like larvae of deer flies and horse flies from the mud and munching mosquito larvae near the surface. They shed their skins, or molt, as many as twelve times as they mature.

Nymphs don’t pupate, but when full-grown they crawl from the water, anchor their toenails (tarsal claws) into the nearest tree stump or boat dock, and “unzip” their skin along their backs. Outdoing any science-fiction film, a graceful dragon or damsel emerges from its monster-skin.

After drying its new wings in the sun for a while, these killing machines fly off to eat pests, and of course to mate in a precise and complex ritual. This choreography involves the male passing a sperm packet from his primary genitalia at the end of his tail to a secondary set mid-body, from which the female retrieves it and inseminates herself. All while hitched end-to-end in a “wheel” and engaged in aerobatics. In some species the pair flies in tandem during egg-laying as well.

I hope you get to enjoy a few days this season and that you get to see dragons and damsels dancing amidst the flowers and foliage.

# ENGELBERT FARMS

## KEVIN AND LISA ENGELBERT & FAMILY

In 1981, Lisa and Kevin Engelbert were the fourth generation of dairy farmers on the family's land in Nichols, New York. They began farming conventionally but found themselves relying heavily on their veterinarian, who would come to their farm on a weekly basis to take care of the cows. Experiencing persistent herd health problems, the couple decided to transition into a more diversified, organic farming operation. The Engelberts established the first certified organic dairy farm in the country and they have never looked back.



Lisa and Kevin built the mission of their farm on the principle of promoting healthy animals, a healthy environment, and healthy people. They believe strongly in the importance of "symbiotic relationships" amongst themselves, their animals and their environment.

The Engelberts also hope to cultivate mutually beneficial relationships with their customers, connecting with a loyal customer base that genuinely understands their organic mission, and the labor involved in producing

top-quality organic foods. The Engelberts' certified-organic milk, cheese, beef, pork and vegetables are available at their farmstand, along with products from other local producers.. ***"It's so nice to see people walk away from our farm stand with a greater appreciation for agriculture, especially with a better understanding of 'organic',"*** Lisa reflects. Having spent childhood summers in Nichols, Lisa comments that the community of Nichols is ***"quintessential small-town America."*** She loves being able to make high -quality food accessible to members of the community.

### AT A GLANCE

YEARS OF OPERATION: 105 IN THE FAMILY  
35 AS ORGANIC

OPERATION TYPE: CERTIFIED ORGANIC  
PRODUCTS: ORGANIC VALLEY DAIRY,  
PASTURE-RAISED BEEF & VEAL, MILK-  
FED PORK, CHEESE, SEASONAL  
VEGETABLES

PRIMARY MARKET: FARM STORE

WANT TO LEARN MORE

ABOUT ENGELBERT FARMS?

VISIT THEIR WEBSITE AT

[WWW.ENGELBERTFARMS.COM](http://WWW.ENGELBERTFARMS.COM)



Lisa Engelbert sings the praises of the “**truly awesome**” organic farming community of Tioga County, as well as the national organic community. In addition to working on the farm, Lisa is employed by the Northeast Organic Farming Association, and feels privileged to be able to share her knowledge to help other organic farmers throughout the state. Lisa has been moved by how supportive the organic community has been to her family during difficult

times. She reflects on the donations of organic feed (with certification papers) and pasture land they received following the flood of 2011, which inundated the floodplains of Engelbert Farms.

When Lisa and Kevin Engelberts’ sons were young, they tagged along with their parents during chores, and had small responsibilities of their own, such as feeding calves. Today, their sons Joe and John are beginning to take over the farm and its operations, making them the fifth generation of Engelberts who have owned and farmed the land in Nichols.



*Photo credit to Organic Valley*

# EPA Worker Protection Standard Update

Written by: Sandra Menasha and Alice Wise

Originally published: Long Island Fruit and Vegetable Update, April 19th, 2018

*Editor's Note: Although this may seem like yet another on your endless to-do list, having proper pesticide trainings, safety measures and records is important whether you are a company of 50 or one. Take some time on a rainy day to get this all in order. You will be glad that you did.*

The updated Worker Protection Standard took effect on January 2, 2017. The NYS DEC has the right to conduct inspections to certify that growers are in compliance with regulations for agricultural pesticides including organics. Inspections include WPS, record keeping, and pesticide storage. The website <http://www.pesticideresources.org> has WPS information, the How to Comply Manual, Worker and Handler Training Videos (English and Spanish), the new WPS Safety Poster and useful WPS checklists. Alternatively, contact the Department of Environmental Conservation or your local Cooperative Extension office with questions.

This is a basic WPS checklist. We highly recommend checking the relevant section in the WPS How to Comply Manual as there are many additional details.

1. All workers and handlers must receive annual training. Workers must be trained before they work in an area where a pesticide has been used or a restricted-entry interval (REI) has been in effect in the past 30 days. Handlers must be trained before performing any handler task.

2. Training of workers and handlers can only be conducted by a certified pesticide applicator, State/Tribal/Federal approved trainers, or a person who has completed an EPA approved train-the-trainer course.

3. Effective January 2018, training videos need to include the new content under the revised WPS. Videos (English and Spanish) can be found at [www.pesticideresources.org](http://www.pesticideresources.org). Keep records of all trainings for 2 years.

4. Check your central posting area and make sure it is easily seen, accessible and the information posted is legible. The central posting area must have safety information (e.g. revised WPS safety poster), pesticide application information and pesticide Safety Data Sheets (SDS). Under the revised WPS, there is a new safety poster with updated safety information. Updated safety posters can be downloaded and ordered at

[www.pesticideresources.org](http://www.pesticideresources.org) or ordered from Ag supply companies such as Gemplers.

5. Information required at the central posting location should also be displayed at permanent decontamination supply sites or at locations with 11 or more workers.

6. Pesticide application information and pesticide Safety Data Sheets (SDS) must be displayed at the central posting location within 24 hours of the end of the application and before workers enter the treated area. Display both for 30 days after the REI expires and keep on file for 2 years from the end of REI. SDS can be obtained from your pesticide supplier or from <http://www.cdms.net/Label-Database>.

7. Pesticide Application information for WPS at the central posting area must include:

- crop treated, location and description of treated area(s),
- product name, EPA registration no., active ingredient(s),
- date and time pesticide application started and ended, and the restricted-entry interval (REI).

8. A farm map is suggested for the central posting area so that workers can easily ID the location of all farm fields. Some growers use names (Main Road Chardonnay), some use numbers or letters (Field 2). The point being that if a DEC inspection occurs, your workers understand and are able to communicate the location of the applications and a farm map makes this easier.

9. Check decontamination kits and upgrade as necessary:

- coveralls, soap and a stack of single use towels
- provide at least 1 gallon per worker using the site or 3 gallons for each pesticide handler and each early entry worker.
- one pint of water (eyewash) must be available to each handler applying pesticides if eye protection is required on the label. For tractor applications, the emergency eyewash water (1 pint) must be carried on the tractor. However, if the applicator gets off the tractor, the eyewash must be carried on their person. At mixing and loading sites, a system capable of delivering 0.4 gallons/minute for 15 minutes or 6 gallons of water to flow gently for 15





minutes must be provided for handlers using products requiring eye protection.

- check expiration date on eye flushing.
- decontamination kits must be within ¼ mile of all workers. Portable kits might be a better option for growers with a large operation.
- make sure all your handlers and workers know where the decontamination sites are and what they contain.

10. The need for eye protection will be listed on the pesticide label in the box entitled "Agricultural Use Requirements", in the section listing PPE (personal protective equipment).

11. Refer to the "Agricultural Use Requirements" box on the pesticide label for a list of all required PPE. Make sure PPE is adequately stocked - chemical resistant suits, gloves, aprons, protective eyewear, boots, respirators and cartridges. Check unopened respirator cartridges for an expiration date.

12. Where respirators are required on the pesticide label, handlers must be medically cleared to wear a respirator, receive annual respirator fit-testing and training. Records of completion of respirator fit-test, training and medical clearance must be kept for 2 years. Note: Owners of the agricultural establishment and family members are not exempt from the respirator requirements under WPS.

- respirators should be cleaned after each use and stored to protect them from damage, contamination and dust
- opened cartridges should be stored in a re-sealable plastic bag when not in use.

13. Application Exclusion Zones (AEZ): There are several different requirements regarding the AEZ in the revised WPS. The size of an AEZ varies depending on the type of application and other factors, including droplet size, and height of nozzles above the planting medium. Refer to the How to Comply Manual to determine AEZ size.

Effective January 2, 2017, agricultural employers are to not allow any workers or other persons in the AEZ within the boundaries of the establishment until the application is complete.

Effective January 2, 2018, handlers are to suspend the application if any workers or other persons are anywhere in the AEZ. This requirement is NOT limited to the boundaries of the establishment. This applies to any area on or off the establishment within the AEZ while the application is ongoing.

14. Start accumulating copies of pesticide labels. All applicators must have a copy of the label immediately accessible. Some growers deal with individual labels, some put together a notebook to be carried on the tractor. Having a copy of pesticide label on your smart phone is not acceptable.

15. When making an application, the applicator must have the following items immediately accessible:

Applicator's license  
Labels for all materials being applied.  
Appropriate PPE (see individual labels for what is required)

16. Tidy up your pesticide storage area. A disorganized, messy storage area is a red flag to an inspector. Pesticide storage guidelines can be found at <http://www.dec.ny.gov/regulations/8871.html>.



## Safe Roads—Sharing the Road with Slow Moving Vehicles

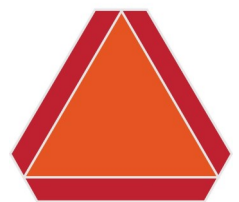
Summer time means there are more tractors on the road and we all need to be more aware of slow moving vehicles to ensure the farmers' safety. In addition, there are some new Amish families in our counties, and they use horse and buggies for transport. Here are some tips for driving our roads (from the SafeNY.gov website):

### When motorists encounter a slow-moving vehicle on the roadway they should:

- Slow down immediately when you see a vehicle or equipment with a SMV emblem in the road
- Increase following distance to create a safety cushion
- Be alert and watch for turns into fields
- Drive courteously
- Pass with care only when it is safe and legal to do so
- Be aware that animal-powered vehicles may make unanticipated movements
- Remember SMV operators may have poor visibility due to loads and equipment in tow
- Be aware that equipment in tow may sway on the road

### Slow moving vehicle emblem

- NYS law requires vehicles that travel 25 mph or less to have a Slow-Moving Vehicle Emblem.
- Placed in the middle of the back end
- Located two to six feet above the road
- Kept clean and replace when faded
- Each piece of agricultural equipment, whether self-propelled or used in combination, shall separately display a slow-moving vehicle emblem
- It is illegal to put SMV emblems on stationary objects – such as mailboxes or driveway posts





## Cornell research is growing the hard cider industry in New York

*By Jennifer Savran Kelly, May 15, 2018, Reprinted from Cornell Chronicle*

To say that hard cider has been making a comeback is an understatement. In the U.S. alone, the hard cider market has increased more than 10-fold in the past decade, with sales reaching \$1.5 billion in 2017. And Gregory Peck, assistant professor of horticulture, has been paying attention.

Taking advantage of this upward trend, Peck has been tapping cider's full potential to grow New York state's apple market. Now he's at the forefront of a hard cider renaissance.

"The industry has been booming because cider producers are innovative," Peck said. "Consumers want to experience something different in their food and drinks. Cider has a rich depth of flavor and range of products that appeal to a large and growing consumer base."

Of the more than 800 cider producers in the U.S., nearly 100 are now in New York. That growth is no fluke: The state has an excellent climate and soils for growing flavorful cider apples. As consumption has swelled, business opportunities have bloomed for the state's apple growers, cider producers and people in the agritourism industry. However, they have lacked the necessary research-based information to meet such fast-growing demand, so Peck has been developing both field- and lab-based research that will provide much-needed guidance.

At LynOaken Farms, a bustling orchard tucked between Buffalo and Rochester near the Lake Ontario shoreline, cider apple trees were planted in 2004 with the goal of using them for cider production at the farm's sister winery. But the family farm owners couldn't find much information on how to grow them.

"Greg wants to see the cider industry advance," said Chris Oakes, production manager at the family farm, which grows 250 acres of apples in addition to other fruits. "He does research right on our farm and shares his data, allowing us to apply it right away. We're predicting 15 to 20 percent growth per year in cider apple volume over the next four to five years. We've been holding steady at 5 to 10 percent growth, so we're on the cusp of something big."

Apples for hard cider contain up to 10 times more tannins than the culinary apples you find in the grocery store. Tannins, a subset of the naturally produced polyphenols in apples, add to cider's mouthfeel, creating a more robust and interesting drinking experience. Peck's lab uses molecular markers to identify the preharvest factors that increase polyphenol development.

While flavor is what consumers notice most, Peck is also exploring ways to increase the quantity of New York-grown cider apples, including best practices for fertilizer, crop load and harvest management. He is studying the hard cider supply chain with Cornell Cooperative Extension's Harvest NY team, and working with the U.S. Department of Agriculture to identify potential new cider apple varieties in their collection of 3,500 unique genotypes.

"Our research is narrowing down the list of optimal cider apple varieties for New York," Peck said. "We share what we learn directly with our growers to help them select varieties that will work best for high-quality and flavorful cider."

Steve Selin, orchardist and cider maker at South Hill Cider in Ithaca, is grateful to have someone at Cornell conducting the research and outreach he needs to improve his business. He gained initial confidence to plant his own orchard after visiting a cider apple test plot at Cornell. Having an expert that ciders can turn to for advice helps nurture the entire industry in the state, he said.

"Most of what we know about making cider comes from research done on wine," Selin said. "The work Greg is doing provides us with crucial information we need to take hard cider to a new level."

*Jennifer Savran Kelly is a writer for the College of Agriculture and Life Sciences.*



Above: Gregory Peck, assistant professor of horticulture, tags apple trees as part of a research trial at Cornell Orchards. Photo: Sasha Israel/Provided.

Next page, top: Doctoral student Adam Karl harvests apples from a hard cider variety trial at Cornell Orchards in September. Photo: Matt Hayes/CALS.



Above: Gregory Peck inspects apple trees at Cornell Orchards. Photo: Sasha Israel/Provided.



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

### Old MacDonald's Farm

June 2, 2018, 10:00 AM - 3:00 PM. Free, family event where you get to learn all about the Agriculture industry. You will get a chance to meet farm animals and the local farmers from Chemung County! Hosted by the Chemung County Ag Promotion Committee. Free and open to the public! Held at the Chemung County Fairgrounds 171 Fairview Rd Horseheads, NY 14845

Please Spread the Word About Groundswell Center's Upcoming Offerings!

**First Thursday Farm Tour & Volunteer Night at the Groundswell Incubator Farm, Ithaca** Thursday June 7th, 5:00-7:30PM Email Liz Coakley, Incubator Farm Manager at [liz@groundswellcenter.org](mailto:liz@groundswellcenter.org) to sign up!

**Wellspring Forest Farm Tour & Mushroom Inoculation** with Steve Gabriel, Mecklenburg, NY Saturday June 9th, 10AM - 12PM Sliding Scale \$20-\$30 (covers the cost of inoculation materials) Register Here (Deadline 6/6)

**Tractor Basics Workshop** with Liz Pickard, Groundswell Center Incubator Farm Saturday June 16th, 10AM - 12PM Sliding Scale \$15-\$25, no one turned away Register Here (Deadline 6/13)

**Farming for Justice Discussion Group** Free! Groundswell Office, 225 S Fulton Street, Ithaca Wednesday June 13th, 9AM - 10:30AM Small-scale Farmer Strategies for Integrating Social Justice Register for June

**Trampoline Presents: Farmer Story Slam!** Ithaca Beer Company Thursday, June 28th 6:30PM, \$10 A live storytelling event where local farmers share hilarious, heart breaking and inspiring stories from the farm! Proceeds benefit Groundswell Center. To sign up to tell a story, email Natalie at [natalie@groundswellcenter.org](mailto:natalie@groundswellcenter.org) or call 607-319-5095

**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.

## Biological Control of Insect Pests

Would you like to learn more about biological control and how to use it successfully? New York State Integrated Pest Management biocontrol specialist Amara Dunn has a new blog - "Biocontrol Bytes" (<https://blogs.cornell.edu/biocontrolbytes/>). Short articles are posted approximately once a month to share information, answer stakeholder questions, and connect readers to other relevant resources. Subscribe using the green button on the right side of the page in order to receive email updates when new articles are posted.

## Woods Walk at the Hobbs Farm in Nichols, NY

Join the Southern Finger Lakes Chapter of the NY Forest Owners Association for a



walk in the woods of the Hobbs Family on Saturday, June 2<sup>nd</sup> from 9:30 to Noon. 2320 Stanton Hill Road; Nichols, NY 13812.

Some of the things that we'll see and discuss at their farm is the utilization of their own timber with a Baker sawmill for Ben's woodworking business, a centralized wood boiler system that keeps two families warm in the winter, invasive brush control projects, and a portion of the woods that is approaching old-growth status.

There's much to see and discuss, so please join us if you can! This walk is free and open to the public, but please help us plan by sending an rsvp to Brett Chedzoy at: [bjc226@cornell.edu](mailto:bjc226@cornell.edu), or by phone: (607) 742-3657. The walk will take place rain or shine and cover approximately one mile of forest terrain, so please dress accordingly!

## Abundant Propagation

Abundant propagation is much more than a course or a deal on plant material. If you sign up for abundant propagation you can receive seeds, cuttings, scions, rootstocks and detailed instructions on how to grow them. I'll be sending out plant material as it is collected. You'll see how to store, sprout, root, and graft as the plants are in your hands. Videos and/or emails will be released as plant material is sent out. I will walk you through the process of turning this material into thriving plants. Many of the seeds will require cleaning and treatment. You can ask me as many questions as needed. My goal is for you to feel the abundance that exists in the world of plant propagation. You will be able to generate several hundred plants or just a few dozen if that is your preference.

You will have access to the same seed and cuttings I use. I gather only from outstanding mother trees. Some species will



be dependent upon a good crop. You can expect to receive almost everything from the list, but there may be some items that are missed. However, there will also be items that are not on the list that will be sent. When I find unexpected treasures, I will send them along. I am a flexible person and can send more or less of certain species as per requests depending on availability.

You can sign up for different levels depending on how many plants you wish to generate or what you would like to grow. All levels will include full instructions and full access to ask me any questions. Even if you are not in need of any growing advice, with levels 2 and 3 you will be receiving a lot of plant material to work with.

Signup must occur before November 1st to receive seeds and cuttings for that year. Signups after November 1st will receive their plant material the following calendar year's growing season. (Note: Many seeds require winter cold treatment in order to sprout).

The first seeds to be sent will be mulberry and juneberry in late June/early July. Seeds and cuttings will come staggered after that until late winter. All the timing will depend on the trees.

Who: My name is Akiva Silver and I will be sending all your plant material and instructions. I am the owner and operator of Twisted Tree Farm. More information at: <http://www.twisted-tree.net/abundant-propagation/abundant-propagation>

### New *Our Farms, Our Future* Podcast Series: Voices in Sustainable Agriculture

From coast to coast, a diverse community of farmers, ranchers, scientists and educators is working to shape a sustainable future for our food system. Listen to the new *Our Farms, Our Future* podcast series and join this community for intimate conversations about the state of agriculture, how we got here and where we're headed. Episode 1 features Missouri farmers and neighbors Emily Wright and Dan Kuebler. They talk about what motivates them to be farmers and to build resilient farming systems, how local food systems can foster community, and the ways that beginning farmers can succeed. [Listen to Episodes 1 and 2 now.](#)

## Tioga County Soil & Water Conservation District Open House

Topics

- AFM Program
- Riparian Buffers
- Benefits of Hydroseeding
- Stream Restoration
- No-Till Drill Display
- Funding Opportunities

Join Soil & Water  
Conservation District,  
United States Department  
of Agriculture, and other  
conservation partners to  
explore programs and  
services provided by the  
agencies that improve  
water quality and promote  
natural resource  
preservation.

Lunch & Refreshments  
will be provided.

Who?

Farmers    Municipalities  
Conservation Minded  
Land Owners

**When: June 21, 2018**

**Where: SWCD Office—183 Corporate Drive Owego, New York 13827**

**Time: 11:00 am—2:00pm      Please RSVP by June 8th—607-687-3553**

*8th Annual*

## CNY Fiber Arts Festival

**JUNE 9 & 10, 2018 10:00–4:00**

**Butternut Hill Campground**  
**6893 Rt 20, Bouckville, NY 13310**

**Handmade Products from Natural Fibers**  
Admission \$6. Weekend Pass \$10.  
Children Under 12 Free. Please, No Dogs.




*Fleece Sale. Children's Activities.  
Over 100 Booths Under Cover.  
Yarn, Roving, Unique Gifts,  
Food, Music, Demonstrations,  
Workshops, Sheep Shearing Demos.*

Featured Presentations on Dyeing.  
Try Spinning at our Wheel Corral.  
More Info at our Website  
[www.cnyfiberarts.org](http://www.cnyfiberarts.org)











## Grand Central Plaza Community Market

4<sup>th</sup> Wednesday of each Month 11am-3pm

Tentative Dates: May 23rd, June 27th, July 25th, August 22nd, September 26th

*Hosted by Grand Central Plaza and Community Broadcasters*

Address: Grand Central Plaza – 1020 Center Street, Horseheads, NY 14845

We welcome you to join us for the first annual Grand Central Plaza Community Market this summer! We will be hosting this event on the fourth Wednesday of each month throughout the 2018 summer season. We are opening up this event to local vendors and invite you to join us! Food and beverages will be available for purchase throughout the Plaza. Vendor spaces are first come first serve (only one rep from each Vendor will be displayed). Set up will begin at 9:00am. The Grand Central Plaza Community Market on Wednesdays will include full marketing coverage for each event with all 5 Community Broadcasters radio stations advertising each event and also will include a Live Broadcast on Wink 106 or 100.9 The Wolf!

Vendor Investment (10% Discount for all dates):

Annual Application Fee \$25.00

\$25 for insured vendor per event

\$40 for uninsured vendor per event

Dates Attending: \_\_\_\_\_

Vendor Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Product Category: \_\_\_\_\_

Please provide a copy of your General Liability insurance and Workman's Compensation Insurance naming Grand Central Plaza, Inc. and Community Broadcasters, LLC as additional insured, and tax ID number along with this form to the below address. If your company does not have a tax ID or carry General Liability and Workman's Compensation insurance we request that you forward that to us in writing.



Cornell University  
Cooperative Extension

*Building Strong and Vibrant New York Communities*

Cornell Cooperative Extension in Tioga County provides equal program and employment opportunities.  
Accommodations for persons with special needs may be requested by calling 607-687-4020.