

May 2021

News From CCE

By Barb Neal, Ag and Horticulture Educator for Tioga County

Happy May! While Mother Nature threw us some curve balls with cold temperatures and flakes in the air in late April, I promise you by the end of May that will be distant memory. One of the benefits of gardening and farming is that you are always looking forward to the next growing season, and, sometimes, to the end of the season!

It is Plant Sale time:

Chemung County Master Gardeners are hosting a hanging basket sale on May 8th. Check out the flier on page 5. This is a great way to bring a pop of color to your porch or garden while supporting the fine Master Gardener program.

Tioga County Master Gardeners are hosting the fourth annual Seed A Rama on May 22nd. Check out the information for Seed A Rama on page 13. Free seeds and starts for the first 100 folks!

And save the date for the **Tioga County Master Gardeners' annual plant sale**: June 5th and 6th at Farmer Brown's Marketplace in Apalachin. Beautiful and unusual perennials will be yours for a great price!

Inside this issue:

- Composting
- Direct Seed or Transplant? Your Veggie Guide
- Farming for Soil Life
- Preserving Beneficials when Doing Garden Cleanup
- And more!

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To lighten your day—here is “Cheeky” the first of 10 lambs born on my farm.

Cheeky like to chill out in the run in shed or just catch some snoozles in the sun.



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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.



When Can I Clean Up My Garden and Still Protect Beneficial Insects?

Amara Dunn, NYS IPM



Don't clean up your garden too early this spring! Pollinators and natural enemies of pests need to stay cozy a bit longer.

The days are getting longer and (sometimes) warmer, trees are beginning to leaf out, spring bulbs are blooming, and lots of people are anxious to clean up their gardens. But you may have heard that cleaning up your garden too early is bad for pollinators and other beneficial insects like natural enemies of pests. Is this true? How long do you need to wait?

What's the concern with early garden clean-up?

There are two aspects of garden clean-up that pose a risk to beneficial insects in your garden: cutting out dead stems and clearing away leaves or other debris on the ground. Some species of wild bees nest in dead stems, so cutting down and disposing of these stems before the bees emerge for the spring is problematic. Dead leaves and other plant debris on the ground provide shelter for natural enemies like lady beetles, fireflies, and ground beetles. Pristinely-raked garden beds remove this shelter. You can read more about the benefits of messiness in [this ThinkIPM](#) blog post.

When should I clean up my garden?

First, please don't clean your garden up in the fall. With the

exception of removing and disposing of diseased or insect-infested plants (especially annuals), let your garden rest in the fall.

Ok, so you've waited until spring. But when? It's complicated. You are trying to protect a diverse group of wild bee species, who are nesting in diverse settings (including both the ground and dead plant stems), in addition to many different species of beetles, spiders, and other arthropod natural enemies of pests. It should come as no surprise that all of these different arthropods emerge from their winter homes at different times. For example, around here (NY) bumble bees, carpenter bees, mason bees, and mining bees emerge earlier (early April) than sweat bees (May). Even within two species of mason bee, [researchers](#) found that the temperature during the winter, the sex of the bees, and their size all significantly impacted when they would emerge in the spring (varying by up to 40 days). Winter temperatures also impact when [alfalfa leafcutting bees](#) and [other bees](#) emerge.



Sweat bees nest in the ground, and emerge a bit later in the spring than some other bee species.

So what should I do?

First, don't let the complexity of the situation paralyze you. Can you leave just a part of your garden "messy" year round, while you clean up the flower bed right next to the street? Do it. Don't let the perfect become the enemy of the good. You might also consider making or purchasing a sign that lets your neighbors know why you are keeping your garden a bit untidy. It could spark some interesting conversations, and maybe you'll start a new trend!

Second – and related to the first suggestion – remember that diversity is a strength. No single way of gardening is good for all beneficial insects. For example, mulch provides shelter for beetles (many of which are predators), but ground nesting bees need bare ground. Different parts of your yard or garden can support different beneficial insects.

Third, the [Xerces Society](#) offers some guidelines for timing garden clean-up by watching the weather and what's happening to other plants around you. However, this advice is specifically for protecting bees, and doesn't address the needs of natural enemies of pests.

- In the northeast, don't start garden clean-up until your taxes are submitted. But realize that even waiting until mid to late April is still too early for some bee species.

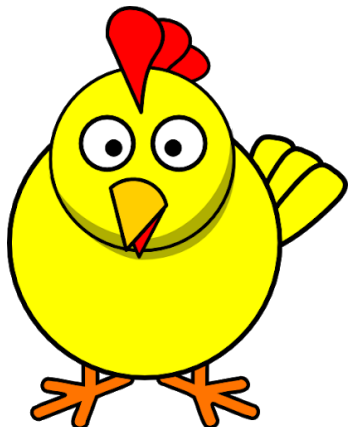
The cool season grasses we usually have growing in our lawns generally require the soil to be about 50° F in order to start growing. Wait to clean up your gardens until you need to mow your lawn regularly. But always remember to [mow high](#).

- Wait until apple and pear trees finish blooming. In the northeast U.S., apricots, peaches, plums, and cherries will bloom early (when many ground-nesting bees are emerging), but apples and pears won't finish blooming until mid-May.

To be extra safe, wait until you are ready to plant tomatoes (when night temperatures are consistently above 50° F). At least in my part of NY, this may not be until late May.

Fourth, if you feel like you absolutely can't wait to do some garden clean-up, change how you dispose of the debris you remove. Cut back last-year's dead stems and pile them loosely in a corner of your yard (rather than bagging them and taking or sending them to a compost facility). Insects that have yet to emerge from the stems can still do so. Once you're well into summer, feel free to compost this debris. But remember that your [landscaping choices can also create spaces for ticks to hang out](#).

Happy gardening!



I did clean up some garden beds in my front yard a bit on the early side this spring. But I piled the stems I cut in a back corner of my backyard.

Want to Learn how to have a Small Flock of Laying Hens? Want Fresh Eggs for your Breakfast?

Join Barb Neal of CCE Tioga as she walks you through how to have a small flock of laying hens. The presentation will be given via Zoom.

- **Thursday, May 13, 2021, 7:00 PM - 8:30 PM**

Have you been thinking about getting your own small flock of laying hens? Layers not only provide wonderful fresh, healthy eggs for your table, but they eat garden bugs and are fun to watch! Come to this free online presentation and learn about having a flock of your own.

Even kids enjoy this presentation!

Go to the CCE Tioga website—Events to get the Zoom link to this fun and informative presentation!

<http://tioga.cce.cornell.edu/events/2021/05/13/laying-chickens-your-own-flock>

Setting up and maintaining hummingbird feeders for reducing spotted-wing drosophila (SWD) populations

Editor's note: There is some encouraging research that shows that use of hummingbird feeders to attract hummingbirds year after year will help to lower your SWD populations. You need a lot of feeders, and they do take maintenance, but it might be worth a try even in your home garden!

Number of feeders per acre

Use 25 to 54 feeders per acre of berries. Research in NY has been done in small (≤ 1 A) raspberry and blueberry fields. Hummingbird enrichment in raspberry resulted in reduced SWD trap catch compared to fields where no feeders were used. Limited research (one year) in blueberry fields with feeders did not yield significant reductions in trap catch. Grower use has been done in blackberry in Mississippi (25 feeders per acre and two species of hummingbird).

Distribute hangers for hummingbird feeders uniformly in the planting, spaced apart to minimize hummingbird competition and at the 25/A to 54/A rate. Place hangers so feeders are in the crop zone. Hummingbirds forage on insects in the same strata they are foraging for nectar. SWD prefers to occupy the interior of the plant canopy.

Hummingbird feeder sugar solution

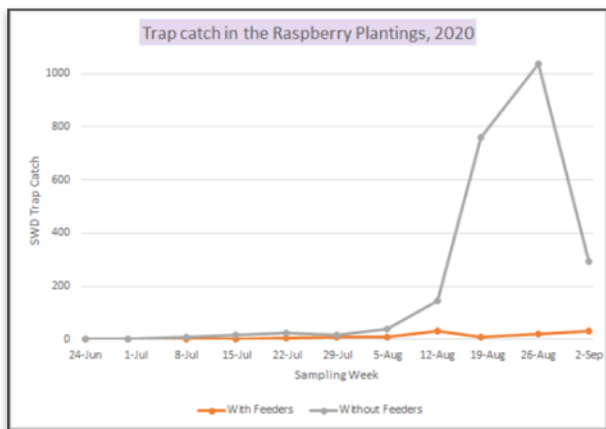


Figure 2. Lower trap catch with hummingbird feeders.

The hummingbird feeder solution is **1 part cane sugar and 4 parts water** ($\frac{1}{4}$ cup sugar in 1 cup water). Each feeder will hold about 1 cup of the feeder solution. Make enough feeder solution to fill the feeders. It is convenient to make about a quart at a time in a beaker or similar container with a pour spout; the spout makes it easier to pour the sticky sugar solution into the feeders without spills.

Replenishing feeder sugar solution

Obtain twice as many feeders as you will need. This gives one set to be filled and carried out to the field to swap with the set in the field when the feeder solution is changed once or twice per week.

An approach for transport to the field: fill the clean feeders with sugar solution, attach the red, plastic floral bottoms, keeping the feeders upside down to prevent leakage. Place them upside down in the shipping cardboard sleeve, fitted into a plastic bin (Fig 1). Use this to carry them to the field to put out the newly filled feeders while collecting the used ones.

Have a separate container (1 liter) of water in the field. As the new feeders are hung, fill the top plastic reservoir with water to prevent ants and other insects from reaching the sugar solution. Take down the feeder that is being replaced; invert it into the box. Hang a newly-filled feeder and fill the reservoir with water. Change the feeder solution once or twice per week. Be especially vigilant during hot weather.

Caring for the feeders

After each change, wash feeders in warm, soapy water and rinse. Soak washed feeders in a 10% bleach solution (1 part bleach and 9 parts water) for 10 minutes and thoroughly rinse with running water. Air dry. This set is then ready to be filled for the next change.

What to expect

The ruby-throated hummingbird is the only hummingbird species ranging into New York State. The first year of using feeders, there may not be very many hummingbirds. However, hummingbirds remember where they find good foraging and nesting



Figure 1. Clean and refilled feeders ready for transport to field.

habitat and will return to it year after year, as will their offspring, to help lower SWD numbers in the field (Fig 2). These birds typically live for 2-4 years. Successful females fledge 1-2 young each year. Therefore, each subsequent year, more hummingbirds will be found visiting the berry planting with feeders. Our research sites had twice as many hummingbirds in the second year as in the first year, from 2015-2016 and from 2017-2018.

SWD management

In conjunction with any biological control method, such as using hummingbird predation, integrate other tactics. Managing SWD in fruit requires an integrated approach. Sole reliance on chemical management may encourage insecticide resistance, so integrate other tactics.

Excellent sanitation – harvest frequently, completely, and remove cull fruit.

Canopy and water management – prune, mow, and weed to open the canopy to sunlight, irrigate to promote rapid drying.

Regular monitoring – baited traps to check for SWD and salt flotation to check fruit for infestation to know if SWD is being controlled.

Cool berries after harvest – 32°F to 35°F will slow, stop, or kill SWD larvae in fruit.

Judicious insecticide use – Insecticides applied against SWD will kill adult flies. Read the label. *Take feeders out of the field before spraying; this could be in conjunction with replenishing the sugar solution.*

Cornell Cooperative Extension
Chemung County



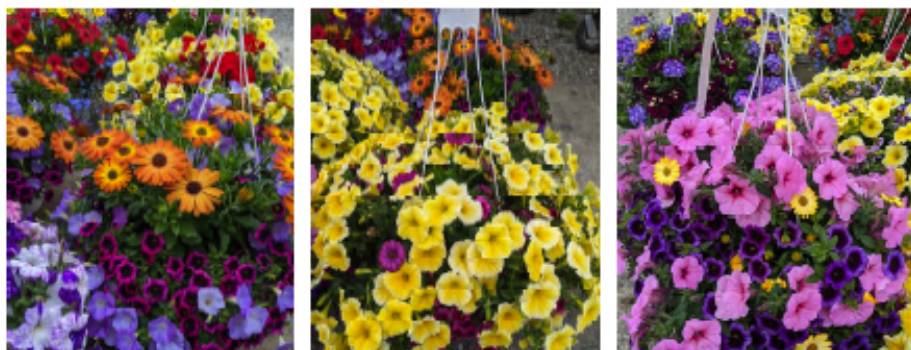
May 8th
Saturday
9:00 AM—4:00 PM



Hanging Basket Sale

Chemung County Fairgrounds, Rabbit Barn

170 Fairview Rd, Horseheads, NY Gate 3



Cash or check only

Wearing a mask is required.

Contact 607-734-4453 or jy578@cornell.edu for details.

Farming with Soil Life—a publication from the Xerces Society

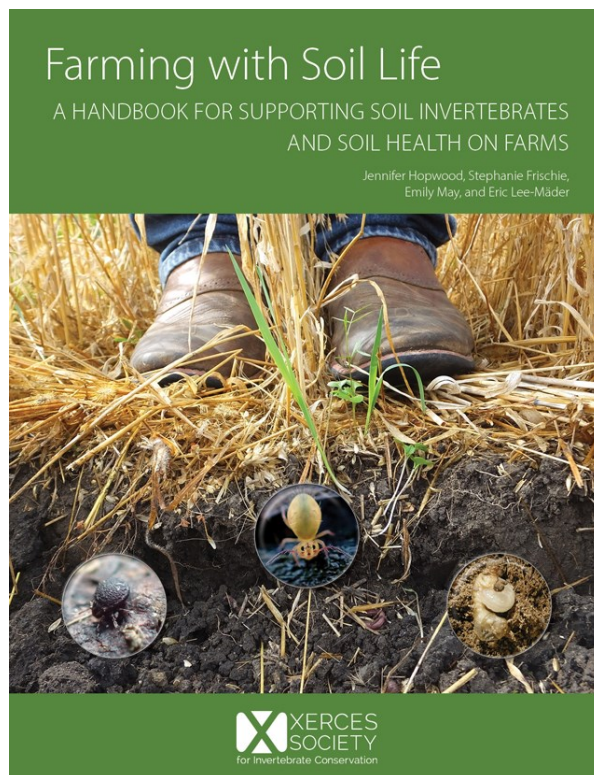
Typically, if soil gets much attention from the general public, it is simply for how well (or poorly) plants grow in it. Soil science—an incredibly rich, complex, and multifaceted academic discipline—has long recognized that Earth’s soils are a dynamic interaction of physical, chemical, and biological properties.

Our understanding and thinking continues to change. Farmers, conservationists, scientists, and others fascinated by soils have started pushing us all to ask questions about what lives in the soil. For the first time, there is a nationwide conversation about the paramount importance of soil biology.

It turns out this biology question is key to many environmental and economic questions of our time. Increasingly, we understand that healthy soils are productive and resilient, ultimately sustaining abundant crops with fewer costly inputs down the road. For reasons that we are just beginning to understand, the biology of certain soils can also suppress plant diseases, much in the same way a healthy gut biome in people might help prevent human diseases. There’s also mounting evidence that we can harness the incredible root systems of plants and their microbial allies to store vast quantities of atmospheric carbon dioxide in Earth’s soils at rates that could help offset human-generated greenhouse gas. And, as we continue to face a striking global loss of wild plants and animals, we are becoming more aware that soil is part of the fundamental ecology of all species—it provides a living platform for tigers and crickets, bacteria and bees, oaks and wildflowers, as well as the minerals that build not only the cells of those species but also our own.

These guidelines are our addition to the discussion on soil biology. It is impossible to tell the story of every living species connected to the ground beneath us. With that in mind, we have focused this guide on the diverse, often overlooked, and essential living species that we know best: the major invertebrates (macrofauna and mesofauna) found in temperate agricultural soils. There is a focus on North America in the groups of organisms and the soil health practices that are covered, but many groups are present in these soil types around the world, and the same management principles apply. Larger soil animals, such as ground beetles, woodlice, and springtails, and their many companions, have received less attention than soil microbes in recent years. We hope this publication helps fill that gap in our understanding and appreciation of the life in the soil.

Here is the link to download a pdf of the bulletin: <https://xerces.org/sites/default/files/publications/19-051.pdf>



Attracting Birds to your Garden

Thursday, May 20, 2021, 7:00 PM - 8:00 PM

Bring motion and life to your garden by creating a bird-friendly landscape. Learn simple techniques and features to add to your garden that will bring songbirds galore to your yard. This engaging online course will introduce you to the world of Birdscaping!

Go to the CCE Tioga website and click on Events to get the Zoom link.

<http://tioga.cce.cornell.edu/events/2015/01/28/attracting-birds-to-your-garden>

Kids Gardening Month

Here at Cornell Garden-Based Learning, we know early exposure to nature in the garden can build a lifelong appreciation for nature and a desire to protect it. Study after study has shown that regardless of race, ethnicity, and socioeconomic status, early childhood experiences in nature affects lifelong environmental attitudes and values ([Chawla, 1998](#), [1999](#), [2006a](#), [2006b](#); [Wells, 2000](#)).

Unfortunately, American children are spending less and less time in the natural world ([Hofferth & Curtin, 2006](#); [Hofferth & Sandberg, 2001](#)), and the pandemic may have increased this trend. Race and class inequalities likely influence children's access to nature ([Chawla, 2001](#); [Hart, 1979](#); [Kahn & Friedman, 1995](#); [Schultz, Unipan, & Gamba, 2000](#); [Wals, 1994](#)), so it is critical to focus on youth who have less access to green space in America - often communities of color and low-resource communities. Links have been made between youth with less access to nature to important childhood health trends, like depression, cognitive disabilities, obesity, and diabetes ([Louv, 2005](#)). However, exposure to "nearby nature," like community gardens, has physical, mental, emotional, and cognitive benefits for children's development, while buffering stressful life events from living in poverty ([Chawla, 1998](#); [Kellert, 2002, 2005](#); [Louv, 2005](#); [Wals, 1994](#); [Wells & Lekies, 2006](#)).

Gardening with youth in schools has been shown to:

- Generate pride among community members
- Instill a sense of ownership, pride, and responsibility among students
- Enhance the appearance, image, and popularity of a school or organization
- Improve the behavior and attitude of young people
- Provide a wholesome activity that keeps all kids engaged
- Connect children to the source of their food
- Heighten children's environmental awareness and promote earth stewardship
- Improve the quality of the curriculum, providing for more effective teaching
- Make valuable connections between disciplines or subject matter areas such as science, math, and social studies
- Foster science literacy

So what can gardening volunteers do to bridge the gap in access for young people, and provide these critical gateways to natural wonder in the garden? Here is some inspiration and ideas from Cornell Garden-Based Learning.



A few of our favorite curricula for young people:

[Gardening in Our Warming World: Youth Grow!](#): Building on our adult curriculum, these activities are self-reflective and inspiring, with exploration on what people and communities are doing around climate change, what youth themselves can do now, and how they see themselves in the future making positive changes. The focus is on systems thinking, sustainability and food systems.

[Dig Art! Cultivating Creativity in the Garden](#): Integrates gardening with the arts. Activities teach ecological literacy through visual art, music, performance, and more.

[Discovering Our Food System](#): An experiential learning program about how food gets from farm to table, and how we – as eaters – are part of the process.

[Seed to Salad](#): Youth grow salad gardens, with emphasis on decision-making and a multidisciplinary approach, including nutrition, physical activity, math, and language arts. [Seed to Salad – Spanish Version](#).

[Youth Grow](#): A leadership program that prepares youth to become actively involved in learning about and transforming their local food systems.

Check out all our curricula at our website:

<https://gardening.cals.cornell.edu/lessons/curricula/>

Transplants or Direct Seeding—What is Best?

By [Steve Reinert](#), Professor and Chair, Horticulture Section, School of Integrative Plant Science, Cornell University, Cornell AgriTech.

March 26, 2021

Sometimes it can be a bit confusing when you're trying to decide whether to use vegetable transplants (starts) or plant seed directly in your garden. There are advantages and disadvantages to each method and a lot depends on both the vegetable and the time of year.

If we lived in a nice, warm place with a long growing season, it would be easy to start everything in the garden with seeds. But here in upstate New York, our growing season is limited to 130 to 150 days of frost-free growing. Although that sounds like a long time, consider how chilly it can be even after the last spring frost. Our soils remain pretty cold into June.

When you plant a seed into a cold soil, it germinates very slowly. Even cold tolerant seeds like peas and spinach, which can be planted right now (late March or early April, depending on the season), germinate better when the soil is warmer. For example, it would take peas about 35 days to germinate with a soil temperature of 41F. Raise the temperature to a still cool 50F and it takes only 14 days. Go to 60F and they emerge in 9 days.

Slow emergence in a cold soil exposes the seed to more plant diseases. The seed may rot before it germinates. As of March 25, soil temperatures in Ithaca were close to 46F and in Geneva, about 50F. You can speed things up by laying a clear plastic sheet over the soil after planting to warm it up. The heat from the sun will raise the soil temperature 10 to 15 degrees. Once you see the seedlings emerging, remove the sheet.

Obviously, if cold-loving seeds like peas have a problem in cold soils, heat-loving crops like tomatoes and peppers would fair much worse. Each requires a minimum of 60F and would prefer a soil ten degrees warmer. That's why we start them indoors where we can keep temperatures warmer and transplant the starts outside later in the season after danger of frost has passed and the soil has a chance to warm up.

As a gardener, you're probably thinking, why don't we use transplants for everything? Unfortunately, some crops respond poorly to transplanting. Beans and peas for example, often succumb to transplant shock and even those that survive will be weak and poor-yielding.

Crops that we grow for their roots, like carrots, beets and turnips also don't transplant well. Often the large taproot is lost, and we're left with a plant with a fibrous root system. That's fine for the plant but not good for us as we need that taproot to harvest.

There are some plants that will do fine planted either way, depending on the season. Lettuce is a good example of that. In the spring, when the soil is cool, it is best to use transplants. If planting in late August for a fall crop, feel free

to direct seed. Lettuce seed will take two weeks to germinate in cold April soil but 3 to 4 days in the summer.

Best ways to start vegetables for our gardens

Direct Seed Outdoors

- Beans
- Beets
- Carrots
- Parsnips
- Peas
- Radish
- Rutabagas
- Sweet corn
- Turnips

Direct Seed or Transplant

- Broccoli
- Cabbage
- Collard
- Cucumber
- Endive/Escarole
- Kale
- Lettuce
- Pumpkin
- Spinach
- Squash

Swiss chard

Use Transplants Started Indoors

- Brussels sprouts
- Celery
- Eggplant

- Leeks
- Melons
- Pepper
- Tomatillo
- Tomato

One advantage of starting your own transplants rather purchasing them from a garden center is choice. Even the best garden center may have no more than 15 or 20 varieties of tomatoes. And likely far fewer of other, less-popular vegetables. By purchasing seed and starting your own, you may have a choice of hundreds of unique varieties.

You might be thinking that with the warm spring weather we've been having that it is too late to start warm-season crops like tomatoes, peppers, eggplant, squash and cucumbers. But one of the biggest mistakes gardeners new to starting their own seeds is starting them too early.

You only need to start tomatoes and eggplant about 6 weeks before transplanting. So, if you are shooting to transplant them around June 1, you have until mid-April or so to start them inside. Peppers can use a bit more time. Start them about 8 to 10 weeks before transplanting. For extra early cucumber and squash harvest, start plants inside 2 to 4 weeks before transplanting outside after all danger of frost has passed. But use care when transplanting as their root systems are fragile.

Starting the seeds indoors sounds easy enough but it requires expertise and special conditions. Gardeners often underestimate the light requirements of the plants and wind up with tall, spindly plants that don't do well once taken outside. Sometimes it's easier to use a professionally grown plant.

Composting Do's and Don'ts

By [Steve Reiners](#), Professor and Chair, Horticulture Section, School of Integrative Plant Science, Cornell University, Cornell AgriTech. This is part of a series of columns that he wrote about vegetable gardening during the pandemic.

[Read more articles from 2021](#) | [Read articles from 2020](#) | [Visit Cornell's Garden-Based Learning website](#)
April 9, 2021

You've read this advice before: "Spread one inch of compost across your garden." But what is compost? How do you make it? And can you make it in your yard? Doesn't it attract rodents and other undesirables? Let's answer some of these questions.

Compost is simply the rotted remains of plants and animals (or animal wastes). This organic matter is exactly the type of material we want to add to our soils. It adds nutrients just like fertilizer. But it does much more. Organic matter helps sandy

soils hold more moisture, so they don't dry out as much. It can improve drainage in heavier clay soils. And it feeds beneficial soil microbes.

Compost also helps fight climate change. Being about 40% carbon, applying compost increases the carbon in the soil which helps decrease the carbon in the atmosphere. Plus, by composting in your backyard rather than sending scraps to the landfill, you reduce the amount of methane released to the atmosphere. Methane is produced when organics decompose in landfills, and is about 30 times more potent as a heat trapping gas than carbon dioxide.

Ideally, a well-made compost pile should be a balance of materials that are high in nitrogen (the greens) and those that are high in carbon (the browns). We classify compostables by the ratio of carbon to nitrogen or the C:N ratio. For example, sawdust is high in carbon and may have a C:N ratio of 500 to 1, 500 units of carbon for every one unit of nitrogen.

At the other extreme, poultry manure is high in nitrogen, with a ratio of just 10:1. Coffee grounds are in the middle, about 20:1. See Table 1 for a list of C:N ratios of common compost ingredients.

C:N ratios of high *nitrogen* materials:

- Poultry manure: 10:1
- Hair/fur: 10:1
- Vegetable waste: 11:1
- Alfalfa: 12:1
- Sheep Manure: 17:1
- Vegetable trimmings/scraps: 17:1
- Grass Clippings: 20:1
- Coffee Grounds: 20:1
- Manure (Cow): 20:1
- Fresh weeds: 20:1

Horse Manure: 25:1

C:N ratios of high *carbon* materials:

- Nut Shells: 35:1
- Manure (Horse) with bedding: 60:1
- Pine needles: 70:1
- Autumn leaves: 80:1
- Corn Cobs: 100:1

- Straw: 110:1
- Paper towel: 110:1
- Office paper: 129:1
- Shredded Newspaper: 170:1
- Cardboard (shredded): 350:1
- Sawdust (fresh): 500:1

The ideal C:N ratio for compost is about 30:1. Higher values have too much carbon and not enough nitrogen for hungry microbes. The process stays cool and breakdown is slow. Compost with lower values have too much nitrogen and can become slimy and smelly.

Examples of green materials include freshly cut grass, garden waste, vegetable and fruit scraps, coffee grounds, tea bags, weeds, fresh manure from horses, rabbits and guinea pigs, hair and fur. Browns include fall leaves, straw, wood chips, shredded paper, paper bags, and sawdust.

You don't need to make precise calculations when you mix your compost ingredients together. But I find it helpful to have some browns handy so that when I have greens that need composting I can layer in some browns to get a good blend. Also throw some soil or old compost in to help introduce microbes. No need to add worms, they will find it on their own.

For a backyard compost pile, don't put in things that will attract rodents and other animals. Meat, bones, fish, dairy products and bread should be saved for a municipal compost facility. Check to see what's available in your town. Waste from cats and dogs should also stay out of the compost as it may contain human pathogens. Don't use ash from a coal-burning stove as it may contain heavy metals. Ash from wood burning fires is okay but use sparingly as it can raise the compost pH much too high.

Some people complain that making compost is a lot of work. That depends on how quickly you want the compost to go from its raw form until it's ready to use. For example, you can make a big pile of leaves in the fall and not do a thing. It may take two years before it turns into leaf mold compost.

Or you can take those leaves, chop them with a mower and mix it with some high nitrogen materials like fresh horse manure. Then every 2 weeks, "turn" the compost. That means taking a pitchfork and turning it over – the top becomes the

bottom and the bottom the top.

Turning the compost puts a lot of air into the pile and the microbes that make the compost breathe air just like you and me. A well aerated pile with the right C:N ratio can even get hot, over 150F. Temperatures like that can help kill weed seeds and disease organisms. In a home compost pile these high temperatures rarely occur. But when they do, you can get compost in a couple of months.

You can make your compost in premade plastic composters available at garden centers or sometimes at your county's solid waste and recycling center. Some purchased models can actually be turned or tumbled to make aerating easy. These aren't necessary to make compost. Freestanding piles in a corner of the yard or wooden bins improvised from scrap lumber work fine. For best results, you probably want a pile that is at least 3x3 feet in size.

I like a two-bin compost system. I can throw all the fresh material in one side through the summer. Layers at the bottom will start breaking down. Come autumn or the following spring, just shovel off the top unrotted material into the empty bin to get down to the ready to use compost.

Try putting the pile in a shady part of the yard. The sun will dry out your pile fairly quickly and a dry pile will break down slowly. Water your compost pile just as you would your garden to keep it moist. Also, shredding material speeds breakdown. The smaller the pieces, the faster they will compost.

Can you put diseased plants in the compost pile? It's possible that some plant diseases could survive in the compost, especially if it does not heat up. But if I didn't put diseased plants in my compost, I wouldn't have much to put in. I hope with all the diversity in my compost pile, diseases won't stand a



chance!

The author designed this three-bin composting station for the faculty-staff-graduate student gardens at the Cornell AgriTech campus in Geneva, N.Y.



Maintaining a strong agriculture community and ensuring a vibrant future for Tioga County's Rural Landscape

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Workshops to Attend

Growing Culinary Herbs Online Class via Zoom

Wednesday, May 20th at 6:30p

Broome County Master Gardener and herb enthusiast Elaine Gregory will take you through the basics of growing, harvesting and preserving some of our most popular culinary herbs and some less common herbs to expand your palette.

The fee for the class is \$10.00 per email. This class will be held via Zoom, a link for the Zoom meeting will be sent to you via e-mail on the day of the event. For more information contact: Dan Cargill at dec24@cornell.edu To register please visit: <https://cornell-cooperative-extension-of-broome-county.myshopify.com/products/growing-culinary-herbs-online-class>



Creating a Butterfly Garden Online Class via Zoom

Wednesday, May 27th at 6:30p

Would you like to see more butterflies in your garden? Broome County Master Gardener Tony Antes will take you through some basic guidelines with step-by-step pictures to plan and plant a garden that will attract an array of butterflies and other pollinators. The fee for the class is \$10.00 per email. This class will be held via Zoom, a link for the Zoom meeting will be sent to you via e-mail on the day of the event. For more information contact: Dan Cargill at dec24@cornell.edu

To register please visit: <https://cornell-cooperative-extension-of-broome-county.myshopify.com/products/creating-a-butterfly-garden-online-class>

Want to buy more local food this year? Bookmark <https://buylocalfoodny.org/>—it is your online source for local food in Tioga and Chemung counties.

Support local farmers and enjoy wonderful local food—a win-win situation!

Weed Identification and Management Online Class via Zoom

Tuesday, May 19th at 6:30p

Weeds getting the best of your gardens? There are ways to prevent them. Learn identification strategies and management tactics to help control weeds in your landscapes. The fee for the class is \$10.00 per email. This class will be held via Zoom, a link for the Zoom meeting will be sent to you via e-mail on the day of the event. For more information contact: Dan Cargill at dec24@cornell.edu

To register please visit: <https://cornell-cooperative-extension-of-broome-county.myshopify.com/products/weed-identification-and-management-online-class>



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.

Seed-A-Rama Returns May 22nd!

- Saturday, May 22, 2021, 10:00 AM - 11:30 AM

Let's Get Growing....Join Cornell Cooperative Extension for SEED-A-RAMA, a seed and veggie start extravaganza!! CCE is hosting the community on Saturday, May 22nd at the Tioga County Fairgrounds 4-H building for a FREE seed and vegetable start pick up. Come between 10 am and 11:30 am, and leave with some vegetable seeds and a few tomato and pepper transplants. We will have enough plants and seeds for 100 people--so come early to get your plants and seeds!

Due to the restrictions and need for social distancing, this will be a **DRIVE THROUGH** event. We will have seeds for you to pick up and a few vegetable starts. Just drive up (please wear a mask), pop open your trunk or roll down your back window, and we will give you seeds, starts, and instructions.

