

Cornell University Cornell Cooperative Extension Eastern New York Commercial Horticulture

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Heat Stressed Transplants- Abrupt Changes Amy Ivy-ENYCHP



April and early May can present a real roller coaster of growing conditions moving suddenly from warm spells to cold snaps, and short downpours to high winds. Transplants face guite a shock when they are moved from the calm conditions of a propagating greenhouse to the field. Even hardened off transplants can suffer under some of the extremes we

experience in spring. In the picture below these young broccoli plants suffered

some heat and/or sun stress when a spell of unseasonably warm weather arrived just after they were transplanted into black plastic. If you look closely you can see the new growth looks okay, so mostly likely these transplants will recover nicely if no more harsh conditions occur.

But even prop house conditions can rapidly become harsh if the sun comes out and the house is not ventilated quickly enough. The tomato transplants in the next picture have suffered from

extreme heat under such conditions. Depending on the extent of the injury these seedlings will probably recover, but of course you want to avoid these setbacks to your young plants whenever possible. Not venting soon enough is a frequent challenge this time of year when there are so many things going on at once on the farm. If you can't manage automatic roll up sides, even thermostatically controlled gable end vents will help let some of that hot air escape when the sun comes out and no one is around.



Heat stressed broccoli 1st week in sun/heat



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Spring Cover Crop Management-don't wait! Thomas Björkman, Cornell



As extension educators and growers, we know that one of the best things we can do for our soils is to incorporate some type of cover cropping system on our farms. The benefits of cover crops I think go above and beyond those that have been reported, but at the same time I have seen some catastrophes

when cover crops are not used properly. In particular is the case of rye: we all love to use rye because we can seed it late in the fall and we still seem to get something out of it in the spring. However, letting rye get ahead of you can be a major issue when it comes to trying to incorporate all of that biomass in late spring/early summer. Not only will it require more labor, energy and trips across a field to work all that organic matter in, but there are other issues we face that me don't necessarily see that can be problematic. I've included an article from Thomas Björkman, one of Cornell's leading experts on cover crops about managing spring covers that I thought should be shared with you. -Chuck Bornt

Spring Management of Overwintering Cover Crops: Don't Wait!- Thomas Björkman, Cornell



cover ccrop trial last year

One of the frightening things about using a rye cover crop is when it rains all spring, and the rye is over your cap by the time you can get to it. Rye that tall is really challenging to manage, and even when you get the ground worked, it takes a long time for the ground to be good for vegetables. Fortunately, there is no need to cut it close on killing that winter cover crop. Most overwintering cover crops give you the most value if you kill them guite early. April is the best time to kill many cover crops. They can be killed with an herbicide that works at lower temperatures, and smaller plants can often be killed with shallow disking. April weather doesn't offer lots of chances to get on the ground, but it is worth taking those chances when they happen.

For getting nitrogen value out of grains like rye, the best time to kill them is when they have recently greened up and have just started to grow perhaps six to eight inches tall. When rye is larger than that, the nitrogen concentration drops, leading to N tie-up when your crop needs it. An early kill can give you 30 to 50 lb N credit (yes, from those little plants!), while killing at boot can be a significant debit. Killing at boot also makes the rye slower to break down, gives less time for it to break down before you need to plant, and the crowns make it more difficult to prepare a seedbed. The risk of missing the chance to kill it also goes up.

Annual ryegrass, on the other hand, only becomes sufficiently sensitive to glyphosate when it's warm enough for it to really grow. Once that happens, don't delay because the young growth is the source of nitrogen.

Fall-sown crucifers usually die in the fall (radish, mustard) or early spring (turnip). The latter is better for recovering N. In either case, there is little regrowth in the spring. The reason to control them early in the spring is to avoid volunteers from stray survivors. If you see yellow (or pink radish) flowers in the field, it should be a signal to act. The boot stage is a commonly recommended age for killing that is usually much too late. It is relevant in two situations: if the rye (usually a rye-vetch mix) is to be killed by mowing or rolling, the stems are susceptible at this point. The vetch is also at its maximum nitrogen content. I consider that a special case where the late kill is appropriate.



In my research program, we tested whether the crop inhibition is reduced if one uses triticale or wheat, which are less allelopathic. We killed all of them with herbicide at early to mid-boot, incorporated and let them break down. We transplanted tomatoes, peppers and cabbage, and direct seeded corn, beans and cucumber. All these crops showed about a 25% reduction in growth in the first month. It made no difference which cover crop. That result shows how deleterious late control of small grains can be, and it is not all allelopathy.

It may seem premature to kill cover crops before they put on much biomass in the spring. You do forego some addition of active carbon. However, the cost of adding the extra organic matter just before planting is too high. It is better to get the nitrogen value and the soil improvement for the extensive root growth, and to work on organic matter production at the end of the growing season. (Source: VegEdge, March 2011, Volume 7, Issue 3)

Wheat in the fall– by: A. Mills

Allium Leafminer or Herbicide Injury: **Distinguishing Damage** Ethan Grundberg - ENYCHP

The History of the Advantage of the



We continue to find more evidence of adult female allium leafminer (ALM) feeding on chives, garlic, leeks, and volunteer onions in the Lower Hudson Valley. While scouting a 2-acre field of chives in Orange County this week, I was faced with the challenge of distinguishing herbicide injury from

ALM feeding damage. Here are some tips on how to scout for ALM feeding damage and how to distinguish it from herbicide injury.

Thoroughly inspect the first 3-5 plants at the beginning of the beds on field edges. ALM adults seem to begin feeding in one corner of the field, so damage is most likely found in the first couple of plants near a field edge. Unfortunately, we often see more pronounced herbicide injury at field edges where nozzles may drip irregularly and excessively after the operator turns the sprayer off. If you see markings that could be feeding damage, check to make sure that the marks are fairly uniform in size and that they are uniformly circular in shape. ALM adults feed very systematically from further up the leaf towards the base making very regular circles down the foliage. If the markings appear to be more sporadic or irregular, it may not be ALM feeding damage.

If the damage only appears on the side of the leaves that are facing upward and the damage is more evenly distributed across the field, it is more likely herbicide injury. When in doubt, send us a picture!

Herbicide injury on chives The state of the s

Herbicide injury on chives

ALM feeding damage on chives in the same field

Seed Corn Maggots-what you need to know Crystal Stewart – ENYCHP



Soil-borne maggots can do a number on a variety of crops if the conditions are right. So far this year we have received numerous isolated reports of heavy seedcorn maggots infestations in fields and even flats in the greenhouse. Seedcorn maggots are the first to emerge after overwintering as pupae in the soil. Adults lay eggs in freshly worked ground (or apparently in seedling flats), and larvae begin developing when soil temperatures are as low

as 50°F. When plants are growing vigorously damage tends to be relatively minor; however when populations are very high or the soil is cold and wet, damage can be severe. Seedcorn maggots have a wide host range and will damage nearly all early crops from onion transplants to fava bean seedlings.

Once you have seedcorn maggots in a field, control options are very limited to nonexistent. The best options are to avoid planting seeds or seedlings into fields with heavy maggot populations through crop rotation which places early plantings into fields will little decaying organic material or by avoiding flights (Peak emergence of the first three generations will occur, respectively, when 354, 1080, and 1800 degree days have accumulated (U. Minnesota)).



Seedcorn maggot on an onion plant. Image: North Carolina Cooperative Extension

WPS Training Resources Ethan Grundberg–ENYCHP

As another reminder, EPA Worker Protection Standards have been revised for 2017 and now require annual training for all workers and handlers. Training must be completed before workers enter a field or greenhouse where a Restricted Entry Interval (REI) has been in effect in the last 30 days. Training must be supervised either by a licensed pesticide applicator (commercial or private), who must also be available to answer any questions in the dominant language of those being trained. The trainings must also be based upon EPA approved training materials and the EPA approval number must be listed on the approved training roster (see the example included below that was designed by Maire Ullrich).

EPA-approved training videos are available for free on YouTube:

English Handler (EPA Handler PST 00010): <u>https://www.youtube.com/watch?v=ArfBQvs_zLE</u> Spanish Handler (EPA Handler PST 00010): <u>https://www.youtube.com/watch?v=f5PhWL0kRBw</u> English Worker (EPA Worker PST 00001): <u>https://www.youtube.com/watch?v=dFcwQCqGbu8&feature=youtu.be</u> Spanish Worker (EPA Worker PST 00001): <u>https://www.youtube.com/watch?v=FuttTYQhM4w&feature=youtu.be</u>

Even if you are an organic grower, you must comply with Worker Protection Standards if you are applying any product with an EPA registration number, which includes commonly used organic pesticides and crop protectants like Surround WP, Entrust, Pyganic, and more. If no one on your farm has a pesticide applicator license, please contact one of us on the ENYCH team or NYCAMH and we will try to help connect you to someone who does and will be able to supervise your training.



Program Location	Date/Time of Training	
Worker Only TrainingHandler Only Training Training Format	Worker & Handler Combined English	
Worker Statement:		
I have attended this WPS Training and have had all of m He asistido a esta WPS formación y he tenido todas mis p	y questions answered. reguntas contestadas.	
Name/Nombre (print)	Signature/Firma	Date of Birth/ fecha de nacimiento
Employer Name/Business/		
Address		
Trainer Name (print)	Signature	

EPA Worker Protection Standard Training Roster

EPA WPS TTT #_

OR

exp. date

Certification # _

Fiddlehead Food Safety and Sustainable Harvesting Annie Mills - ENYCHP Field Tech

Fiddlehead ferns are a beautiful showcase of the seasonal wild food that New York has to offer. You may have seen these tightly curled portions of the ostrich fern for sale at farmers markets or even at the grocery store. They can be found growing along river edges or streams and are found fresh in New York for only a few short weeks from mid-April to early June. Unlike some common ferns, these are considered to be non-toxic and safe to eat. However, since these are a wild (non-cultivated) food you should be cautious when offering fiddleheads to consumers. Your customers should be fully aware of how to cook fiddleheads properly as there have been reported outbreaks of food poisoning associated with eating raw or lightly cooked fiddlehead ferns in New York and Canada. That being said, here are a few tips about how to protect the environment where fiddleheads grow and also protect your customers while they enjoy this seasonal delight.

Tips for Harvesting

- 1.Fiddleheads are a smooth & bright green, they have a papery sheath covering them as they emerge, and the stem has a defined "U" shaped groove on the inside
- 2.Pick them when they are tightly curled, before they unfurl—the unfurled fern is highly attractive, but not safe to eat! Ferns are best harvested at about two to six inches tall
- 3.Don't over harvest— don't harvest more than half the fiddleheads in a cluster or from crowns that seem especially small (less than 4 fiddleheads)

How to Handle and Prepare Fiddleheads Safely

- 1.Clean the papery husk off of them by thoroughly rubbing it off and wash fiddleheads using several changes of fresh cold water to remove residual dirt
- 2. Fiddleheads should never be eaten raw they can be cooked safely using two methods, boiling or steaming
- 3.Cook fiddleheads in a generous amount of boiling water for 15 minutes, or steam them for 10 to 12 minutes until tender. Discard the water used for boiling or steaming the fiddleheads
- **Cook fiddleheads before sauteing, frying, baking, or using them other foods like mousses and soups

Resources

https://www.youtube.com/watch?v=a2yEdUkx8UQ **(Identifying Fiddleheads)** https://www.canada.ca/en/health-canada/services/food-safety-fruits-vegetables/fiddlehead-safety-tips.html https://extension.umaine.edu/publications/4198e/ https://www.cdc.gov/mmwr/preview/mmwrhtml/00032588.htm

http://www.saratogafarmersmarket.org/one-hit-wonders-spring-know/

Could We See a Repeat from a Couple Years ago of True (or Common) Armyworm? Chuck Bornt - ENYCHP

We have heard from field crop educators in Western NY and as far away as Michigan that they are seeing significant numbers of True Armyworm (may also be referred to as Common Armyworm) adult moths being captured in their pheromone traps. You might remember a spring a couple of years ago where True Armyworm larvae were all over the place including field crops, cover crops, small grains and even lettuce and can attack almost any vegetable crop including sweet corn, brassicas, tomatoes, peppers etc. Adult Armyworm moths migrate up here from the south during May and June.







True Armyworm larvae



Feeding on sweetcorn



True Armyworm Adult

They are fairly large moths which are primarily nocturnal and have the ability to lay up to 2,000 eggs in their two week life. Eggs are laid in clumps on the leaves of grasses and hatch in 7 to 14 days. Once hatched, the pale green worms begin feeding immediately, going through four stages of development over three week period. Once fully grown, these mostly brown colored worms will be about 1 1/2 inches long with a narrow broken white stripe down the center of the back and stripes along each side of the body. Once matured, fully grown larvae will drop to the soil and pupate. New moths emerge about 15 days later.

The larvae are very eager feeders and can do a lot of damage in a short time and because they tend to like the cover of the foliage, they can remain hidden for first couple of instars. Their feeding damage is easy to recognize and tends to appear ragged, with large holes eaten in the leaves and lots of frass or droppings. They tend to feed on the top sides of crops during the night and on the undersides or deeper into the plant during the day. Not only is their damage a problem, but on things like lettuce, the droppings can affect marketability of the crop.

Best control is achieved when the larvae are small (1st and 2nd instar). There are a number of insecticides labeled for armyworm including organic products Pyganic, Dipel, and Entrust, but please read the labels first to make sure the insecticide is labeled for the intended crop and rates you want to spray. Again, these products are going to work best when applied to small larvae. There are also a number of conventional insecticides labeled for 1st and 2nd instars), Coragen and Lannate. Ensure that you get thorough coverage of the canopy with any of these products. Because the worms are also mostly nocturnal like the adults, I would be inclined to apply insecticides late in the evening to keep products wet as long as possible to ensure worms contact and ingest them.

Newly hatched larvae are mostly pale green. During the day, they hide in the folded leaves in the whorl of the corn plant. Upon becoming about half grown (3/4 to 1 inch) their body color becomes brown with considerable color variation among individual worms. The caterpillar stage lasts about 3 weeks, but the caterpillars are usually 10 to 14 days old before damage is noticed. By this time, many of the larvae will have small, white eggs stuck to their bodies just back of the head. These eggs hatch into parasitic maggots which enter the body. Those larvae that reach maturity dig into the soil to pupate. Next generation moths emerge about 15 to 18 days later.

Life History

True armyworms tend to overwinter in states to the south of Pennsylvania as partially grown larvae under plant trash and in clumps of grass, and as

pupae in the soil. Moths emerge from early May to early June and migrate northward. Flights of armyworm moths can be detected with pheromone traps available from a variety of suppliers. Adult moths lay eggs on weeds and/or grasses along field margins, on leaves of corn, or on small grains. Larvae hatch about a week later and develop over a period of approximately 3 weeks, feeding mostly at night. When eggs are not laid on corn, caterpillars move to corn when weeds or grain cover crops are killed with herbicides. There are two and possibly a partial third generation. Second generation larvae generally cause little damage.



Farm Cooler Checklist

Whether your winter storage rooms are getting bare or you are making the transition from sweet corn to potatoes, what better time to do a good cleaning and even sanitizing than now?

Housekeeping - Start by emptying the room and removing all visible debris with sweeping or vacuuming. Next scrub with an appropriate detergent soap and rinse according to the cleaner's label. A final step of sanitizing surfaces according to the sanitizer's label may be prudent and could improve storage quality and food safety. If you've used water to rinse, wash or sanitize, be sure to allow time and air flow (and maybe even some heat) for complete drying before packing the cooler again.

This is also a good time to check over the construction and make some simple repairs that are not so simple when tons of produce are in the way. Some examples of maintenance items might include; finally connecting that evaporator drain so it doesn't drip condensate on the bin below, replacing damaged paneling and insulation to prevent rodent visitation and heat gain, replacing exposed light bulbs with shatter proof fixtures or energy efficient upgrades (http://go.uvm.edu/effvtag), or sealing up corners or other areas. More details are provided below and a quick reference checklist is provided on the reverse.

Finish Surfaces -How clean can you get the inside of your storage room? If you currently have untreated plywood or chipboard, think about upgrading to a smooth, cleanable surface (http:// go.uvm.edu/

smoothnclean). These

easier to keep clean,



finish materials make Smooth, clean and shiny, this CoolBot™ cooler used TrussCore™ twinwall PVC as a finish surthe space a whole lot tace

can help prevent plant pathogens in storage, can improve food safety and make the space more pleasant to work in.

Envelope Check - You can improve energy efficiency, increase storage quality and reduce rodent damage by maintaining a solid envelope around your storage room. While you're cleaning, check all door seals to be sure they are in good repair and are functioning well. Replace worn rubber seals, make door closer and latching adjustments to ensure a proper seal, close the whole room up while standing inside with the lights off and look for daylight around the door or other areas. Seal those spots up. Any gaps in your sheathing or other holes in walls, corners, etc? Seal them up. Obvious signs of rodent intrusion should get extra attention and rodent control measures (http://go.uvm.edu/rats) should be taken.

Equipment Check - Now is a good time to make sure your refrigeration and other temperature control equipment is working as planned.

Connections - Check any visible electrical wiring and refriger-

ant lines. Any significant wear or obvious damage that should be repaired now? Are refrigerant lines still wellinsulated?

Inside - Check the evaporator (the place the cold air comes from). Can you see through the fins clearly in every channel (you may need to shine a light from the opposite side)? Is the drain pan clean and free of debris? Is the drain connected to piping or hose and directed to the floor, a bucket or an outside drain? Is the drain clear, clean and functioning properhv?



Outside - Are the compressor (generally a black cylindrical part) and condenser (radiator and fan) clean

This cooler has no floor drains. Instead the evaporator drain is plumbed to a bucket that is emptied according to an SOP

and clear of debris? Grass, leaves, dirt, etc. should be removed from the equipment. Condenser (radiator) fins should be cleaned with a vacuum and even pressure washed to provide for effective heat removal and improved energy efficiency. Is there good air movement possible around the condenser? Is this the year to put a roof on the compressor and condenser?

CoolBots TM (http://go.uvm.edu/coolbot) - Check the pitch of the AC unit. It should be pitched slightly to the outside and there should be a drain hole at a low point to allow water to drain out of the bottom. Are both heat exchangers clean and clear of debris and dust? Is there a good seal around the AC unit to prevent air infiltration? Does your AC unit have a "vent"? Check to be sure it is set in whatever position you want. Venting (or fresh air) will bring in some outside air which is good for higher ethylene producers or crops seeking lower RH storage. Otherwise, the vent should be closed. Also check your CoolBot wiring and especially your fin sensor to be sure they are securely fastened and in position.

Operation - Power up the system and adjust your thermostat to force a call for cooling. Inside - Are all evaporator fans coming on as they should? Is the unit producing cold air? Outside - Is the compressor coming on when there is a call for cooling? Is the refrigerant hot where it should be (between the compressor and the condenser or outside heat exchanger) and cold where it should be (going back inside to the evaporator)?

CoolBots - Does the AC unit power up? The fan should be blowing air. The compressor should come on within about 30 seconds. The CoolBot control should power up and indicate your setpoint and current temperature. Does the AC unit produce cold air?

Controls / Thermostats - Is your thermostat as tired as you are? Does it allow you precise control of temperature? Is now the time to upgrade or replace it (http://go.uvm.edu/thermostats)?

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Farm Cooler Checklist

Lighting – Do you have functioning lights? Is now a good time to add them in? How about an automatic occupancy switch so they turn on or off automatically when your hands are full of that awesome produce? Have you considered shatter-proof lighting fixtures? Or <u>energy efficiency</u> upgrades (http://go.uvm.edu/effvtag)?

Plan for a Full Room – Think about last year's storage season and what you had a hard time reaching when you needed it. Can you change your loading this year to make access easier? Also remember that you likely have a variety of conditions in your storage room with the coldest, driest, highest airflow zone being close to the evaporator and the warmest, most humid, still zone being at the end furthest from the evaporator. Does your planned loading take that into account? Should crops be relocated to accommodate optimal storage? Any other lessons learned from last year that you can take action on now? Should you consider building additional storage space now to accommodate any expanding production?

CHECKLIST

Cleaning and Sanitizing

- Empty storage room completely.
- Sweep / vacuum inside of storage room from floor to ceiling.
- Clean inside surfaces of storage room with an appropriate cleaner or detergent, following manufacturer's label instructions.
- □ Sanitize inside surfaces of storage room with an appropriate sanitizer, following manufacturer's label instructions.
- Dry thoroughly. Allow time, provide ventilation and consider heating slightly to ensure complete and thorough drying after cleaning, sanitizing and/or rinsing.
- Upgrade or Repair Finish Surfaces to ensure a solid, smooth, cleanable interior. (<u>http://go.uvm.edu/smoothnclean</u>)

Envelope

- Inspect envelope for damage, cracks or other openings and seal as needed.
- Check for daylight from the inside with the door closed and lights out. Note and repair any worn seals or other places where light comes in.
- Adjust door closers and latches for a secure seal when closed.
- Check for signs of rodents or other pests and make necessary changes to prevent them. (<u>http://go.uvm.edu/rats</u>)

Equipment

- Inspect power wiring and outlets or junction boxes for wear or other items needing repair. Take care to ensure power is off during this check.
- Confirm or install working lights. Consider efficiency upgrades to lighting and using an occupancy switch. (<u>http://go.uvm.edu/effvtag</u>)
- Check insulation and ensure good general condition of refrigerant lines.

- □ Clean evaporator fins to be sure air can move freely through them. You should be able to see clearly through each channel when a light is shown from the other side.
- Clean evaporator drain pain and look for signs of blockage (e.g. standing water, sediment, mold, etc.)
- Ensure evaporator drain is functioning, connected from pan to an intentional outlet (floor, bucket, outside drain, etc.) and allowing water to flow freely as intended.
- Clear the compressor and condenser (outside) of leaves or other debris.
- Clean the condenser (radiator) fins with a vacuum and/or pressure washer.
- Protection the compressor and condenser from the elements with possible a shed roof, etc.

Operation of Cooling

- Confirm thermostat operation, set a low temperature on the thermostat and listen for the "click" of a relay or note the output indicator light. Consider whether a thermostat upgrade is appropriate. (http://go.uvm.edu/thermostats)
- Check operation of evaporator fans (inside). Do they come on uniformly when the unit is powered up (or when summer cooling mode is selected)? Is the unit providing cold air? Evaporator fans are often a key efficiency upgrade that is likely supported by Efficiency Vermont (<u>http://go.uvm.edu/effvtag</u>).
- Check operation of compressor and condenser fan (outside). Is the compressor running when there is a call for cooling. Is the condenser fan running. Are refrigerant lines hot between the compressor and the condenser and cold going back to the evaporator inside? You may also want to explore an upgrade of compressor and condenser for improved efficiency (<u>http:// go.uvm.edu/effvtag</u>).
- Heaters Note, these same checks can be used for heated spaces when applied to a heater.

CoolBotsTM - (http://go.uvm.edu/coolbot)

- Pitched down and out, allowing for evaporator water to drain away toward the outside.
- Ensure the drainage hole is open and clear allowing water to drain.
- Ensure both heat exchangers are clean (inside / evaporator and outside / condenser).
- Set the AC vent according to whether you want outside air makeup or not.
- Check location and condition of temperature sensors, especially the fin sensor.
- □ Check the seal around the AC unit in the wall to make sure it is sound and preventing air infiltration.
- Check operation of the unit by forcing a call for cooling.
- Capacity and Planning
- Do you have all the storage space you need for the coming year? Time for a quick expansion or a new zone?

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Lavender and Mint Essential Oil Project

Lawrie Nickerson started her four-acre organic pledge blueberry farm in 2008. She and her farm partner, Karen added eight lavender varieties, annual cut flowers, and pumpkins in 2013 to diversify the farm. Due to the interest in lavender from blueberry U-Pickers they July 12 Hay Berry Farm FREE Field Workshop 2:00 - 4:00pm 1176 Babcock Lake Rd, Hoosick Falls, NY

continue to develop their sustainable lavender production skills. This field day will highlight Lawrie and Karen's experience growing lavender and Dr. Lily Calderwood's Northeast SARE partnership grant titled "Development of Mint and Lavender Production in the Northeast." In May, we are planting lavender, spearmint, and peppermint cultivar trials here and at Lavenlair Farm in Fort Ann, NY. The goal of this research project is to evaluate essential oil herb cultivars for pest challenges, winter hardiness, yield, and oil quality.

Free workshop but please register here: http://bit.ly/2qIrCvh Contact Dr. Lily Calderwood with questions: lbc75@cornell.edu



Facebook





Cut-Flower Field and High Tunnel Production

Tiny Hearts is a cut flower farm, growing on 15 acres in the Hudson Valley. With 6 acres in production annually, Luke and Jenny market to florists, wholesale accounts, offer wedding and event floral design, have a local CSA, and sell flowers at their local farmers' market. They use organic management tactics and are currently implementing

ecological pest management in their fields and greenhouses.

Free workshop but please register here: http://bit.ly/2pBTROB Contact Dr. Lily Calderwood with questions: lbc75@cornell.edu

Minecto Pro Insecticide/Miticide Registered for Use

As of April 27, 2017, Minecto Pro is registered for use in New York state (not for use in Nassau or Suffolk counties). Minecto Pro (IRAC Groups 28 and 6) is a combination insecticide that includes the active ingredients cyantraniliprole (same a.i. as Exirel and Verimark) and abamectin (same a.i. as Agri-Mek). Growers who incorporate Minecto Pro into a spray program need to take care to not exceed overall maximum annual application rates of those two active ingredients if Exirel, Verimark, and/or Agri-Mek are also used. For onion thrips management, make sure to not spray Minecto Pro sequentially with Agri-Mek or Exirel to help with resistance management. Like Agri-Mek, Minecto Pro will be most effective at managing onion thrips when the first application is made when thrips populations are around the one thrips per leaf threshold. Read the label thoroughly to make sure you are spraying in accordance with maximum application rates and resistance management protocols.

VEG NEWS