UMass Extension
Vegetable Notes
For Vegetable Farmers in Massachusetts since 1975

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CROP CONDITIONS

It's meeting season! Last week's New England Vegetable and Berry Grower's Association meeting in Hadley, MA drew a large crowd with over 80 growers attending and speakers from all over New England presenting on topics such as growing day neutral strawberries under low tunnels and about irrigation supplies. This week, the first Vegetable Winter School program on Nutrient Management was a success – 19 farmers and consultants of all ages, experience levels, conventional and organic worked together to develop nutrient management plans for their farms. Some were surprised to find that their cover cropping practices and soil organic matter were contributing significantly to their crops' nitrogen needs, and very little or even no additional nitrogen was required in some cases. Hotze Wijnja gave a thorough update of changes in the Nutrient Management regulations to be released later this spring, and was pleased to participate in helping farmers with nutrient management plans. It's not too late to register for any one of the future sessions of Vegetable Winter School! Click here to register and see a full agenda of classes taking place every Tuesday until the end of February. On the topic of meetings, don't miss our Extension Educators Lisa McKeag with Michael Botelho of MDAR presenting on the Food Safety and Modernization Act and Sue Scheufele with farmer Danya Teitlebaum presenting on a high tunnel spinach research trial they did at the NOFA-MA conference this weekend in Worcester. Click here to register. There are two other great meetings this month in Vermont (where Katie Campbell-Nelson will present research on mustard biofumigation) and in New Hampshire there is a series on Labor Management. Check out the Events section for more information on all these program.

Winter on a typically diverse New England vegetable farm.

During breaks at winter school, much discussion was overheard about equipment repairs, purchases, and retrofits growers are working on now. In response to one complaint about a 1953 Farmall that kept breaking down and leaking oil, another grower quipped, "Well, that's how you know it's working! If it stopped leaking, then you should be concerned that you've run out of oil." While some are working on equipment, others are busy with winter growing, and even if crops aren't growing that much this time of year, pests can still be active! One grower in Hampshire County, MA reported leaf miner in high tunnel beet greens this week. Be vigilant about scouting your crops this time of year; it is not yet clear how main season pests are adapting to tunnel environments, and we are not exactly sure when they might be active in these situations. Reports of spinach downy mildew continue to come in from high tunnels across the region. Determining the race of the pathogen present is difficult, but at least one of the recent isolates has been identified as race 14. This is consistent with what we know about the varieties that are being affected, many of which have resistance to races 1-13. Like many pathogens, downy mildew of spinach can be seed-borne. Plan ahead and get your seed treated with our UMass Hot Water Seed Treatment service!

BEST MANAGEMENT PRACTICES FOR FARMERS USING SEEDS TREATED WITH NEONICOTINOID INSECTICIDES

Written by Dr. Kimberly Stoner, CT Agricultural Experiment Station

Neonicotinoids are a group of insecticides that have a mode of action similar to that of nicotine and are often used as seed treatments because they can travel from the seed into the plant and control insects feeding on plants as well as on the seed Honey bees, native bees such as bumble bees and mason bees, and many other native pollinators are critically important to Connecticut's agricultural community. While the primary concern is acute exposure to neonicotinoid insecticides, particularly from airborne dust associated with planting of treated seed, there is growing concern regarding the chronic exposure to foraging bees from nectar, pollen, and plant guttation which supplies water bees transport back to the hive.

Four neonicotinoid insecticides that are highly toxic to honey bees and native bees such as bumble bees are regulated by Connecticut Public Act 16-17 (An Act Concerning Pollinator Health): clothianidin, dinotefuran, imidacloprid, and thiamethoxam.

Some common trade names for insecticides used as seed treatments with these active ingredients are (1):

Clothianidin: Poncho, NipsItInside, Poncho/VOTiVO

Thiamethoxam: Cruiser, Platinum, Actara

Imidacloprid: Gaucho, Admire, Wrangler

Although neonicotinoid seed treatments are used on a wide range of crop plants, including soybean, cotton, canola, wheat, sunflower, potato, and many vegetables (1,2), reported honey bee kills from neonicotinoids have most often been associated with dust from corn seed released by vacuum planters at planting time (3,4,5,6). In addition to affecting honey bees and native bees, neonicotinoids applied as seed treatments may also affect other beneficial insects (7,8) and contaminate groundwater, streams and wetlands (9,10,11). Treated seeds are also attractive to birds, and the amount of neonicotinoid on one treated corn kernel is enough to kill a songbird (12). Thus, there are many reasons to be careful in using neonicotinoid-treated seeds.

General Principles for Best Management Practices:

- Do not use seed treated with neonicotinoids unless there is a specific pest problem that can be effectively managed with a neonicotinoid seed treatment.
- When the use of neonicotinoids is not warranted, purchase seed that is not treated with this group of chemicals (seeds may be treated with fungicides or other pesticides). If seed selection is limited, contact your seed company's field representative to request increased selection and availability of seed that is not treated with neonicotinoids.
- Before planting with seeds treated with neonicotinoids, notify any nearby beekeepers, so that they can protect their bees. Also remove flowering plants from the field and field edges by mowing or tillage.
- Read and follow all instructions on the seed tag including personal protective equipment to be used in handling seed and required buffer zones.
- Keep the treatment on the seed during storage and handling. Avoid storing seed under extreme temperatures and excessive humidity that may increase the breakdown of the seed treatment.
- Reduce insecticide dust produced at planting, keeping the treatment on the seed as much as possible. Load treated seed into planter boxes in a manner that will minimize the dust from becoming airborne. Minimize any drift of dust outside the field. Most problems with neonicotinoid-contaminated dust drifting in the air have been with treated corn planted using vacuum planters. There is currently no single solution to this problem. Options, including using deflectors or filters on the planting equipment and changing the lubricant mixed with the seed, are discussed below.
- Avoid planting on windy days when any dust will blow into the environment, particularly if wind is blowing toward bee hives, flowering trees or standing water sources used by bees.
- Dispose of any leftover treated seed properly, following directions on the seed tag. Generally it is best to plant it or bury it in an appropriate place away from water bodies.

- Dispose of any dust left over in seed bags and filters properly, following any instructions on the seed bag or using the hazardous waste collection process in your municipality. (Because this is farm waste rather than household waste, there may be a fee.)

Specific Information: Seed treatment with neonicotinoids has advantages when compared to application of pesticides by other methods, particularly when used to control insect pests that feed on seeds or seedlings early in the season. Neonicotinoids have a combination of high toxicity to insects and low toxicity to mammals that make them safer than many of the older insecticides, and application to the seed allows the amount applied per area to be greatly reduced compared to soil or foliar applications (6, 13). However, several studies have found that neonicotinoid seed treatments are being widely used in crops and regions where there is little or no economic benefit (14, 15), and in some cases even reducing yield by killing off the natural enemies of pests (8). The Integrated Pest Management (IPM) approach would call for using a preemptive pesticide treatment only when there is a high probability of a target pest causing economic damage or when rescue treatments cannot keep the target pest under the economic injury level (15, 17). This approach would greatly decrease the use of seed treatments (15, 16) and the associated unintended consequences of overuse of pesticides including evolution of insecticide resistance, outbreaks of non-target pests, resurgence of target pests, and negative effects on the environment (14 ,16).

For some crops, neonicotinoid seed treatments have been overused in part because seed producers sold these as part of a "package" along with fungicide treatment or genetic modifications for resistance to insects not controlled by neonicotinoids (14, 16). According to Canadian authorities, most seed companies can accommodate orders for non-insecticide treated seed (16).

As with any application of an insecticide highly toxic to bees, drift of insecticide dust onto bee hives and onto flowering plants being used by bees should be avoided. Although research has shown that honey bees are mostly using flowering trees such as maple, willow, apple, cherry, and hawthorn at the time of spring planting (17), other spring flowering weeds and wildflowers like clovers, dandelions and mustards are also used by honey bees (17) and mustards and clovers are very important to bumble bees and other native pollinators (18, 19).

Although seeds of many different crops have been treated with neonicotinoids, bee kills at planting have generally been associated with treated corn (3, 4, 5, 6, 21). A few studies of treated seeds of other crops have found much less insecticide dust in batches of sugar beet and oil seed rape seeds than in corn (6), although another detailed study found that wheat may have as much risk of dust drift as corn (22).

The most important factors affecting the amount of dust released into the air when planting neonicotinoid treated corn seeds are the quality of the seed treatment, the equipment used for planting, and the weather conditions at the time of planting (6, 17, 21). The quality of the seed treatment depends on how well the seed has been cleaned before treatment; the formulation of the treatment, including the active ingredient (insecticide), polymers used to stick the active ingredient to the seed; and film coatings added to the outside (6,17). The quality of the seed treatment has been shown to be variable across corn varieties and among batches in various studies (17, 21), and this has been correlated with bee kills (21) or with high levels of dust released at planting (17).

The equipment used for planting has also been found to be important. Most farmers growing corn use pneumatic precision seed planters, also called vacuum planters (5, 6, 17, 21). A few studies have compared vacuum planters to planters using a mechanical method or compressed air to place the seed, and have found that the planters without a vacuum produce much less dust (16, 21) and less hazard to bees (21) than vacuum planters. In vacuum planters, corn seeds are precisely spaced in the row by using a vacuum, generated by a central fan, to aspirate the seeds onto a perforated disk, and to keep each seed sticking to a single hole in the disk until the seed drops into the furrow (5, 21). The fan draws air in through an air intake, and then exhausts it through an outlet that is typically 4 to 6 feet above the ground (5, 21). A lubricant, such as talc or graphite, may be used to keep the seeds from sticking together, but also abrades the seed and creates insecticide dust, which mixes with the lubricant (23). This mixture of lubricant and insecticide dust travels in different directions: some travels into the furrow and is planted with the seed, some is exhausted into the air, and some remains behind in the planting equipment (23). Xue et al. (5) have also shown that field dust is sucked in through the air intake, abrades the seed, and then is exhausted into the air. Because neonicotinoid insecticides break down slowly and are so heavily used, the field dust already has residues of a neonicotinoid (clothianidin) before it goes into the planter, but the carry-over pesticide accounts for only 5% of the insecticide residue in the aerial dust; 95% of the neonicotinoid residues are from seed dust (5).

The combination of defective seed treatment and the vacuum planter system can create the problem of dust highly toxic to bees traveling into the air and potentially coming into contact with bees or plants used by bees (5, 6, 17, 21, 23). Various modifications have been tried with some degree of success. After a large bee kill in Germany associated with poor quality seed treatment of corn and vacuum planters (21), Bayer (the pesticide manufacturer) instituted standardization of seed treatment, training of workers, and testing of seeds to make sure that dust was minimized, and also worked with European equipment manufacturers to create kits to modify the vacuum planters to release the exhaust air, and thus the dust, at a lower air speed close to the ground, ideally into the furrows (6, 21). These deflectors were required in some European countries, but they generated such a large amount of dust close to the ground that many farmers refused to use them (6).

The province of Ontario requires farmers to use a new lubricant, Bayer Fluency Agent (ethane, a homopolymer), rather than talc or graphite, when planting neonicotinoid-treated seed of corn or soybeans (20). However, a direct comparison of this lubricant compared to the lubricants chosen by farmers (talc, graphite or a mixture of the two) showed no significant difference in dust released (17). A change in lubricant may not be effective in reducing insecticide dust if field dust is also entering the system and abrading the seed (5).

There are many points at which farmers could modify the planting system: using no-till planting to avoid generating field dust (5), filtering the air intake to limit field dust coming into the planter (5), using a new seed lubricant to reduce abrasion of the seed (20), diverting the dust into the seed furrow during planting (6, 21) or filtering the air exhaust (5, 6, 21). In my discussions with scientists researching these options, none is currently considered the single best option (Reed Johnson, Ohio State University; Art Schaafsma, Guelph University; personal communication).

Once the planting is finished, it is important to collect any spilled seed and dispose of spilled and leftover seed properly. Seeds left on the soil surface are particularly a hazard to birds. According to a study by the American Bird Conservancy, a single corn kernel treated with any of the commonly used neonicotinoids can kill a songbird, and 1/10 of a treated corn kernel is enough to reduce reproduction in a songbird (12). Seed disposal instructions should be on the seed tag. Generally it is recommended to plant leftover seed in the headland or in double rows in the field or to bury it away from water bodies.

At the end of planting, the farmer may be left with seed bags contaminated with insecticide dust, or if filters have been used on the air exhaust of the planter, these filters will have collected the insecticide dust. Dust may also be left behind in the planting equipment, and should be vacuumed out using a vacuum with a filter. This then leaves the farmer with the problem of disposing of bags and filters with insecticidal dust. If there are instructions on the seed tag or label about how to dispose of the dust, those should be followed. Otherwise, seal the material securely and dispose of it using the local hazardous waste process. Because this is farm waste and not household waste, there may be a fee.

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UCONN EXTENSION'S 2016 CSA PRICES IN CT

Written by Jiff Martin, UConn Extension

Community Supported Agriculture (CSA) is an arrangement whereby customers pay growers in advance of the growing season for a guaranteed share of the season's harvest.

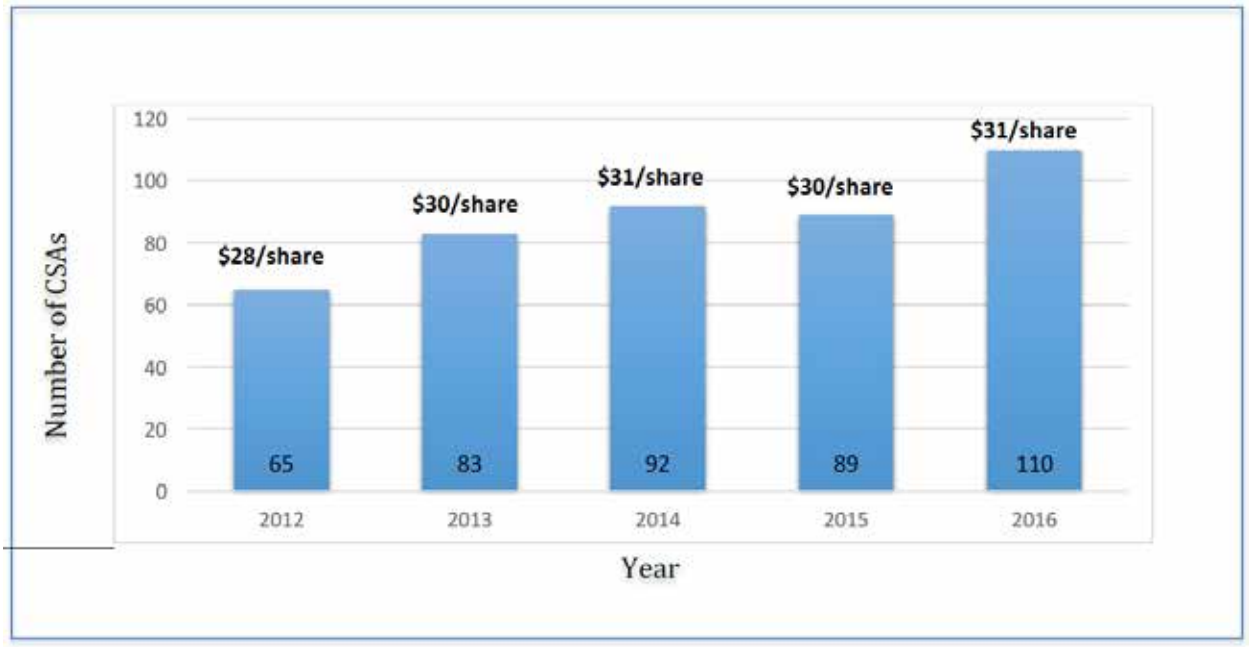
Price Study Background: Our research goal is to monitor prices that farm businesses are charging for a standard summer vegetable full share and to report our findings to producers. This is the fifth year we have collected CSA pricing data. We rely heavily on the price of CSA memberships (or shares) as advertised by farms and producer associations on websites and through social media. We compared prices of full CSA shares, typically offered for 16-20 weeks from July to October, that featured vegetables, herbs, and sometimes flowers or small fruit. We did not attempt to compare the contents of CSA shares, nor did we evaluate pricing for add-on items such as flower shares, fruit shares, meat shares, egg shares, etc. In response to producer inquiries, this year we also compared pricing for CSAs that advertised as USDA Certified Organic or had taken the CT NOFA Pledge (a program for CT NOFA members, for more info: https://www.ctnofa.org/farmerspledge.html). Below is a summary of our findings, as well as a full list of the CSAs that were included in the study.

We found pricing data for 110 farm businesses offering CSAs in 2016. We identified 17 farm businesses as USDA Certified Organic1, and another 32 were identified as having taken the CT NOFA Farmer's Pledge() but were not certified organic.

Results:

- Average weekly price of 2016 Summer Vegetable CSA = $31.06
- Max price = $50.00; Min price = $15.00
- Average weekly price for USDA Certified Organic only = $32.37
- Average weekly price for USDA Certified Organic & CT NOFA Pledge = $31.94

For the full report please check out UConn Extension's New Farms Program here.



SEED HEALTH: HOT WATER SEED TREATMENT AND GERMINATION TESTING

Two strategies to help you start the season with healthy, disease-free seed are hot water seed treatment to kill pathogens followed by a germination test to ensure a good stand. Even when only a small percentage of seeds are infested, disease can spread among transplants in the greenhouse or in the field, causing significant crop loss or increasing the need for sprays. In some cases, whole seed lots may be infested and this can result in severe disease outbreaks, as all seedlings will be affected and young plants may not be able to overcome early, systemic infections (Figure 1). Using disease-free seed is an important first step in management of many diseases, and hot water treatment is an effective tool for small-seeded crops such as tomatoes, peppers, spinach, onions, carrots, and all the brassicas. Hot water seed treatment is a cheap and effective way to penetrate the seed and kill pathogens that might be present. Whether or not you choose to treat your seeds, a simple germination test can be very helpful for determining viability of saved seed, old seed, or your treated seed.

Kale seedling emerged from infested seed show symptoms of Alternaria leaf spot. Photo K.Campbell-Nelson.

Hot Water Seed Treatment: Not all pathogens can penetrate and survive within the seed but bacterial pathogens are commonly seed-borne, and some fungi, oomycetes, and many viruses can

be seed-borne. Tomato, pepper and brassicas are good candidates for hot water seed treatment because there are common bacterial diseases of these small seeded crops that can be easily prevented. Even though bacterial pathogens do not survive well in soil once infected crop residues have decayed, they can be difficult to manage once established on a farm. Preventing establishment of these diseases, or their reintroduction year after year, is a critical management tool. Large seeded crops (beans, cucurbits, peas, etc.) cannot be effectively disinfested with hot water treatment because the temperature required to heat the whole seed inside and out would kill the outer seed tissue and the seed will not germinate. Chemically-treated or pelleted seed also cannot be hot water treated. Treating seed saved for more than one year or seed saved from a heavily infested field may inhibit germination entirely. Treat no more seed than you think you will use in the course of a season, as hot water treated seed may not remain viable for as long as untreated seed.

To decide whether to use heat treatment, first determine the likelihood that seed-borne pathogens could be present based on the crop (see table here). Next, ask your seed supplier if the seed was produced in a way to minimize exposure to seed-borne pathogens and if the seed was tested for their presence. Find out if the seed has already been treated with hot water or if it has been primed, as treating again could adversely affect the seed.

The temperature of water for treating seed varies from 115 to 125°F, depending on the crop, and the treatment period varies from 10 to 60 minutes. It is important to use the appropriate protocol for each crop to control pathogens without damaging the seed. While hot water seed treatment can be done effectively on a stovetop, it is much better to use a precision water bath and an accurate thermometer.

For details on treatment procedures for each crop and for a list of supplies needed please see this factsheet published by Cornell and Rutgers Cooperative Extensions.

Germination Testing: It is a good practice to conduct a germination test on seed stored for more than one year, on your own saved seed, or on seed that has been hot water treated. Primed, chemically-treated and pelleted seed may also be germination tested, but be sure to wear gloves when handling chemically treated seed. A germination test will also help you determine if in-field germination problems were due to bad seed, or if environmental conditions or a field pest was the culprit. Unlike hot water seed treatment, a germination test can easily and accurately be completed on the farm without special equipment. You will need 2 weeks to complete the test, so now is a good time to do it.

If your greenhouse has a moist chamber, this is a great place to do your germination test, but a warm, dark place will also work. Inside the greenhouse may not be a suitable place, as the seeds will dry out quickly. To conduct the test, prepare two 8” x 8” squares of blotting paper or heavy weight paper towels for each seed lot you will be testing. Spray the paper towels until

moistened with warm tap water, but not too moist, especially for melon seeds which rot easily. If you have a small seed lot, place 25 seeds,

VEGETABLE	MIN. (°F)	RANGE (°F)	OPTIMUM (°F)	MAX (°F)
BEAN	60°	60° - 85°	80°	95°
BEAN LIMA	60°	65° - 85°	85°	85°
BEET	40°	50° - 85°	85°	95°
CABBAGE	40°	45° - 95°	85°	100°
CARROT	40°	45° - 85°	80°	95°
CAULIFLOWER	40°	45° - 85°	80°	100°
CELERY	40°	60° - 70°	70°[z]	85°
CHARD SWISS	50°	50° - 85°	85°	95°
CORN	50°	60° - 95°	95°	105°
CUCUMBER	60°	75° - 95°	95°	105°
EGGPLANT	60°	40° - 80°	85°	95°
LETTUCE	35°	40° - 80°	75°	85°
MUSKMELON	60°	75° - 95°	90°	100°
OKRA	60°	70° - 95°	95°	105°
ONION	35°	50° - 95°	75°	95°
PARSLEY	40°	50° - 85°	75°	90°
PARSNIP	35°	50° - 70°	65°	85°
PEA	40°	40° - 75°	75°	85°
PEPPER	60°	65° - 95°	85°	95°
PUMPKIN	60°	70° - 90°	95°	100°
RADISH	40°	45° - 90°	95°	95°
SPINACH	35°	45° - 75°	70°	85°
SQUASH	60°	70° - 95°	95°	100°
TOMATO	59°	60° - 85°	85°	95°
TURNIP	40°	60° - 105°	85°	105°
WATERMELON	60°	70° - 95°	95°	105°

Table 2. Soil Temperature Conditions for Vegetable Seed Germination. Compiled by J.F. Harrington, Dept. of Vegetable Crops, University of California, Davis. z Daily fluctuation to 60° or lowers at night is essential.

Fig 2. Germination test of hot water treated and untreated Siberian Kale saved from a field infested with Alternaria. The treated seed germinated more quickly than the untreated. Photos by K. Campbell-Nelson.

evenly spaced on one moistened surface. If an accurate count is needed, use 100 seeds and larger paper towels. Cover the seeds with the second paper towel and gently place inside a gallon size ziplock bag. Do not seal the bag completely–leave a 3" section unzipped. Clearly label each bag and place on a greenhouse heating pad. Keep the heating pad temperature at 75°F, or see Table 2 and use the optimum germination temperature for each variety. Germination of many Solanaceous seeds is inhibited by natural gas, so do not place tests for these seeds near gas stoves or water heaters. Check on the seeds daily, re-moistening the towels as needed. After 7 days, count the total seeds with vigorous germination and record the number. Repeat this again after 14 days. Take the average of the 2 germination totals and use that number to calculate the % germination. Averaging the germination rates will take into account seed that is more vigorous (germinating after 7 days) and seed that may be less viable (after 14 days).

Germination standards are provided by the rules and regulations of the Federal Seed Act and can vary widely. For example, carrots may be sold commercially with a germination rate of 55%, while cucumbers must be at 80% germination. It is up to you what germination rate you are willing to toleratein your fields, but a minimum of 75% is common. Table 2 gives the ideal germination temperate for various vegetable seeds, these should be followed in germination testing and also planting in the greenhouse or field.

Hot Water Seed Treatment Service through UMass Extension Vegetable program. If you read this article and would now like to treat your seed but do not have the equipment, contact the UMass Extension Vegetable Program for details: umassvegetable@umext.umass.edu or call: 413-577-3976. Or, Click here.

Resources: Ashworth, S. *Seed to Seed 2nd ed.* Seed Savers Exchange, Iowa, 2002.

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-by K. Campbell-Nelson updated from material by R. Hazzard and S.Scheufele.

Events

Vegetable Winter School

When: Tuesdays, January 10th, 2017 – February 28st, 2017 from 9am – 3:30pm

Where: Brigham Hill Community Farm, 37 Wheeler Rd, North Grafton, MA 01536

Save the dates for this course designed to provide growers with regulatory certainty in a time of many regulatory changes. Leave winter school ready for a Commonwealth Quality Program (CQP) audit and the peace of mind that you are prepared to handle the requirements of: the Food Safety Modernization Act (FSMA), EPA Worker Protection Standards (WPS), Nutrient Management Regulations, and changes in Employment Law. Get up to date on research and IPM practices important to vegetable growers and gain a competitive advantage in a heavily regulated market. Each farm will get detailed support in developing food safety and nutrient management plans, training employees in WPS, developing standard operating procedures compliant with regulations, and preparing an employee handbook and a whole farm IPM plan. **Twelve contact hours available for the vegetable pesticide license category.** This course is designed for farm owners, managers and employees.

Click here to register for individual sessions: regonline.com/vegwinterschool

Questions? Contact: Katie Campbell-Nelson, kcampbel@umass.edu, 413-545-1051

NOFA-MA Winter Conference

When: Saturday, January 14th, 2017 from 9am – 3:30pm

Where: Worcester State University

More than 70 popular workshops and experts from the field on organic farming, gardening, landscaping, homesteading, DIY skill building and soil/human/animal health. This year's keynote speaker will be Paul Kaiser from Singing Frogs Farm in Sonoma County, CA. Paul and his wife Elizabeth have been successfully demonstrating how to produce high volume, high quality vegetables in an inspiring no-till system since 2007.

*Sue Scheufele and Danya Teitelbaum will be discussing the SARE spinach project described in this newsletter, so come on out if you're interested in learning more about SARE projects, spinach disease management, and winter growing! Register online here: http://www.nofamass.org/events/wc

Vermont Vegetable and Berry Growers Association Annual Meeting and Cover Crop Conference

When: Monday, January 23, 2017 and Tuesday, January 24th, 2017
Where: Lake Morey Resort, 1 Clubhouse Road, Fairlee, VT 05045

Pre-registration is $40 per day, per person for VVBGA Members; $50 per day for Non-Members.
Add $10 per day, per person, for walk-in registrations. Pre-registration ends Jan. 20th. 2017 VVBGA member dues for 2017 are $35 per farm ($45 if received after January 31.)
Register and/or join on-line at https://2017vvbga.eventbrite.com
Or: print, fill out, and mail the membership and meeting registration form with your check to:
VVBGA, PO Box 2091, South Burlington, VT 05407.
http://www.uvm.edu/vtvegandberry/VV&BGA/2017MembershipPlusMeetings.pdf
Lodging is $95 per room at the Lake Morey Resort; please make your own arrangements. Attendance at either of these events will be worth pesticide re-certification credit for applicators certified in categories 1A, 2, 3, 6 and 10.
Questions? Contact: Vern Grubinger, UVM Extension, 802-257-7967 ext. 303, or vernon.grubinger@uvm.edu

Sponsored by: USDA, Risk Management Agency and Farm Service Agency; Frazer Insurance Group; Vermont Compost Company; Vermont Agricultural Credit Corporation; University of Vermont Extension; Vitalis Seeds; and the VVBGA.

2017 New Hampshire Labor Management Series

When/Where: 10am-3pm, January 30th in West Lebanon and January 31st in Portsmouth

Labor Law • Hiring & compensation • Volunteers, workers, interns, contractors, employees etc. • Tax Forms • Workers comp • Unemployment insurance • Payroll taxes • Working in the US • Handbooks • Contracts. *Presenter: Rachael Armstrong - Founder, Executive Director and Attorney at Farm Commons*

When/Where: 10am-3pm, February 6th in West Lebanon and February 7th in Portsmouth

The Business of Labor • Setting the pace • Efficiency in body motion and tools • Setting employees up for success • Building effective crews • Creating a Productive work environment • Full cost of hiring an employee • Hiring employees vs making equipment purchases. *Presenter: Ellen Pollshuk - Vegetable grower, farm consultant and teacher at Potomac Vegetable Farm*

When/Where: 10am-3pm, February 13th in West Lebanon and February 14th in Portsmouth

Leadership & Communication Systems in Managing people • Employee Satisfaction & Productivity • Communication • Personal styles • Employee styles • Adapting to different styles • Creating effective teams • Managing a crew • Performance Management Skills • Tips from Corporate America. *Presenter: Belinda Peavey SPHR, HCS - Vice President, Talent Management and Organizational Performance at Dartmouth-Hitchcock*

When/Where: 10am-3pm, February 27th in West Lebanon February 28th in Portsmouth

Hiring & Retaining • Finding good employees • Interviewing techniques • Hiring • Effective Training / On-boarding • Developing Effective Job Descriptions • Setting up Expectations • Whole Farm Revenue Program • Noninsured Crop Disaster Assistance Program. *Presenter: Pat McCabe - Human Resource Partner, UNH*

To register: $25/person/session, lunch included.

Kilton Public Library West Lebanon, NH January 30, February 6, 13 and 27 Register here: http://bit.ly/2dTouJx

Urban Forestry Center Portsmouth, NH January 31, February 7, 14 and 28 Register here: http://bit.ly/2erUmpo

Sponsored by: *NOFA VT, New Hampshire Farm Bureau. In partnership with: Northeast Extension Risk Management Education, RMA*

NEVBGA & Cooperative Extension 594th Growers' Meeting

When: Saturday, February 4, 2017 from 8:30 am to 4:00 pm

Where: Hudson-Concord Elks Lodge

There is a $20 registration fee, which is waived for members of NEV&BGA. Lunch buffet is an additional $20.

To register, please visit our Eventbrite page: https://goo.gl/Zsg7Cn, or contact the secretary at 917-573-5558 or secretary@nevbga.org by January 27

- Bird Management in Fruit & Vegetable Crops – Dr. Alan Eaton, University of New Hampshire Extension
- Grower Roundtable on Bird Management in Sweet Corn – Paul Gove, Gove Farm, Leominster, MA; Steve Clegg, 4 Town Farm, Seekonk, MA; Patrick Usher, Usher Farm, Bristol, RI
- Crop Insurance Update – Tom Smiarowski & Paul Russell, University of Massachusetts Extension Risk Management/Crop Insurance Education
- Optimizing Spring Cover Crop Nitrogen Utilization on Vegetable Farms – Rebecca Maden, University of Vermont Extension
- Small Fruit Production and Weed Management at Nourse Farms - Nate Nourse, Nourse Farms, S. Deerfield, MA
- Neonicotinoid Label Registrations: Update from Nate Nourse on Congressional Meeting in D.C.
- Food Safety Modernization Act Update: What to Expect in Massachusetts – Lisa McKeag, University of Massachusetts Extension
- 2016 Bell Pepper, Butternut Squash, Sweet Corn & Strawberry Evaluations – David Handley & Mark Hutton, University of Maine Extension

CISA's Mapping Out Your Farm Future Series

When: January-March; Eight weeks
Where: Holyoke Community College Kittredge Center, Room 303 Homestead Ave, Holoyke, MA

CISA invites you to join our eight-workshop series on ***Mapping Out Your Farm's Future: Settings Goals for the Success and Sustainability of Your Farm*** beginning January 2017. In order to draw a map of the future of your farm, you need a solid foundation with which to review your past and assess your present. This workshop series will support farm owners and operators in decision making for realistic long-term financial, operational, marketing, and personal goals. Examples in the workshops will be farm related, but the skills and methodology will be relevant to all businesses.

Participation in the whole series is encouraged. You will be eligible for a one-on-one consultation by attending one Business Plan workshop. Attending three workshops gives you the eligibility for an additional one-on-one consultation related to the topic of any workshop being held. Dinner will be served at each session. The cost to attend the series is $90 for Local Hero members, or $15 for each individual workshop. The non-member fee is $110 for the series, or $18 for each individual workshop. **Register with the attached form or online at buylocalfood.org or contact Stevie Schafenacker at stevie@buylocalfood.org (413) 665-7100**. If cost is a barrier to your participation, please feel free to contact Stevie to discuss options as we want everyone to be able to get the training they need to effectively operate their business. Scholarships may be available.

The **first half hour** of each workshop will be **for food** and socializing. Workshops will begin promptly thereafter.

2017 Winter Flower Growers Program—Co-sponsored by MA Flower Growers Association and UMass Extension

When: February 8, 2017

Where: D&D Farms Inc., Stow, MA

Program Preview – *with more to come*:

*Respirator Fit Test Training, *Al Sorensen, UMass Public Health*

Reading and Analyzing Your Fertilizer Bag, *Cari Peters , JR Peters Inc.*

*5 Ways to Create Continuous Biocontrol in Greenhouses, *Carol Glenister, IPM Laboratories*

Using Social Media to Benefit Your Business – Grower and Retailer Panel

Also… Allied Trade Tables and *2 pesticide credits

Mail-in registration using form below or print off form from website and mail.
More details and registration form: http://ag.umass.edu/greenhouse-floriculture

10th Annual SEMAP Ag & Food Conference

When: Sunday, February 26th, 2017 from 9am – 3:30pm

Where: Bristol County Agricultural High School, 135 Center St., Dighton, MA

Whether you're a professional farmer, a backyard gardener, or just curious about locally grown food, this is the event for you! Each year, the lineup includes workshops for the general public as well as info-packed sessions for farmers and gardeners of all experience levels.

Registration includes a locally-sourced lunch and at the Resource Fair you'll learn about local organizations and businesses that provide services and products to help you grow, whether you've got a hundred acres or a couple of window boxes.

*Sue Scheufele, UMass Extension staff will be giving a talk on Cucurbit IPM.

Look for more details and registration info coming soon!

Sponsors

Vegetable Notes. Katie Campbell-Nelson, Lisa McKeag, Susan Scheufele, co-editors.

Where trade names or commercial products are used, no company or product endorsement is implied or intended. Always read the label before using any pesticide. The label is the legal document for product use. Disregard any information in this newsletter if it is in conflict with the label.

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