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Weekly Vegetable Update

Special Edition

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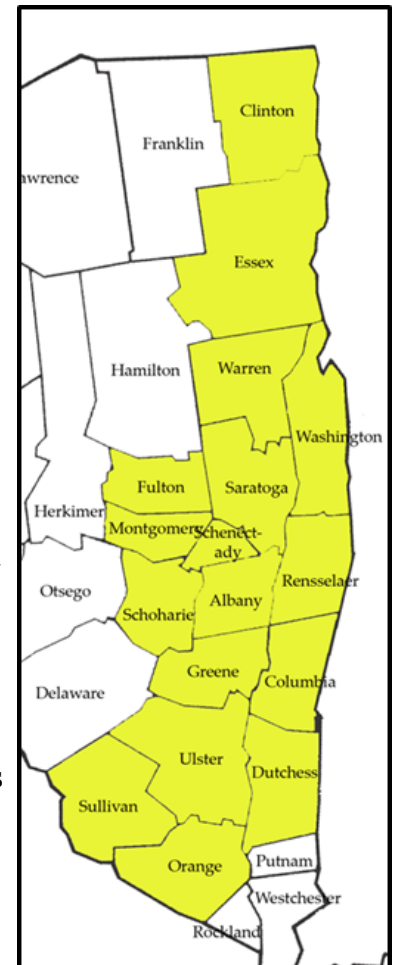
Welcome to this year's first issue of the *Weekly Vegetable Update*, formerly known as the *Weekly Update*. If you have received this publication in the past, you may notice a few changes beyond the name this year. The biggest change will be the addition of new contributors who will bring perspectives from the Hudson Valley and the North Country. As our Capital District Program expanded to the north and south to become the Eastern NY Commercial Horticulture Program, we welcomed Amy Ivy of Clinton County, Maire Ullrich of Orange County, and Teresa Rusinek of Ulster County to the team.

With the added real estate comes an opportunity to expand tracking of pest and disease movement and phenology. We will be starting each *Update* with an overview of what we're seeing in the North Country, the Capital District, and the Hudson Valley so that growers will be able to get a quick snapshot of the whole region, and can both address what is happening now and what might happen in the near future.

As we make this transition to a larger team we welcome your feedback. Please always feel free to contact any one of us.

We're all looking forward to a great growing season, and to seeing all of you in the field.

Cheers,
Your ENY Commercial Horticulture Team



All of the shaded counties included in this map are part of the ENYCH Program

Disinfecting Used Tomato Stakes

Wooden stakes are a place where the bacterial pathogens that plague tomatoes can survive between crops. In fact, stakes from a tomato planting where research was conducted on bacterial diseases have been used as a source of the pathogen for subsequent experiments! Therefore, it is prudent for growers to disinfect stakes that were in a field where a bacterial disease occurred last year. This step is worthwhile even if there is uncertainty about occurrence considering how difficult bacterial diseases are to manage. There are three bacterial diseases of concern on tomato: speck, spot and canker. Bacterial canker is sufficiently destructive that discarding stakes is recommended after an outbreak. Before the field season is in full swing often presents an opportunity to find time for disinfecting stakes.

Step one in disinfecting anything is removing as much dirt and debris as possible because this can protect pathogens and de-activate disinfectant. Therefore start by hosing down used tomato stakes.

Clorox or other household chlorine bleach (5.25% sodium hypochlorite) is commonly used as an agricultural disinfectant, although quaternary ammonium chloride, detailed below, is a better choice. Use bleach at a rate of 0.5% (= 1 part bleach + 9 parts water). And use in a well-ventilated area. **Soak stakes for 30 minutes.**

While bleach is highly effective, it is short-lived after mixing in water, with a half-life of only 2 hours, and it is especially prone to being inactivated by organic matter, thus pre-cleaning is critical. A disinfectant containing quaternary ammonium chloride salts like Green-Shield is



more stable than bleach after diluting with water. Use at 1 Tablespoon (= 0.5 fl oz) of Green-Shield in 1 gallon water. While this disinfecting solution will be more stable than bleach, it should not be used more than 24 hours after preparation.

Organic growers typically use a disinfecting solution with hydrogen dioxide or peroxide as the active ingredient, such as an OxiDate or SaniDate mixture. Check the labeled rate on the formulation you choose, as initial strengths will vary.

Regardless of the sanitizer, you need to soak stakes for at least 10 minute to allow sanitizer to penetrate into the porous wood surface. -CDB, edits by CLS

It's Time to Test Your Soils!

While you wait for your fields to dry out and the soil to warm, and before you add any amendments or fertilizer to your soil, take a soil test – you may be surprised by what it reveals. We have seen some dramatic deficiencies and excesses in some results. The only way to know for sure is to test.

A standard vegetable test costs \$12 at the Agro-One/Dairy-One lab in Ithaca. Put your Extension Educator's name on the form so we'll get a copy too, which expedites our ability to comment. The link to the form is: <http://www.dairyone.com/AgroOne/soiltesting/Form%20V.pdf>, or we can send you a paper copy. This is a Modified Morgan Soil Test package and includes pH, Modified Mehlich Buffer pH (lime requirement), organic matter and extractable phosphorus (colorimetric), potassium, calcium, magnesium, aluminum, iron, zinc



Photo from <http://www.omafra.gov.on.ca>

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and manganese plus Cornell generated nutrient recommendations if a valid soil name is provided. You can use whatever lab you like, the main thing is to stay with the same lab time after time so you can compare your results as you make amendments. Different labs often use different extractants which can make comparing results between them impossible.

The test result is only as good as the sample you provide, so take the time to gather a representative, composite sample. Use a small plastic bucket or grocery bag and a clean shovel or soil probe (free of rust) and take about a half cup of soil from 6-10 locations from the field to be tested. Do not include the surface soil which may have contaminants or plant matter but do include soil from 2-6 inches deep. Mix these samples together in your bucket to make one composite sample. Let the soil air dry before sending about 2 cups of it to the lab.

This link has more details about soil sampling: <http://www.dairyone.com/AgroOne/soiltesting/soilSampling.htm>

Beets, broccoli, cauliflower, celery, rutabaga and turnip have high boron requirements, especially if the pH is 7.0 or above. For these crops consider having the extra \$10 boron test done, and check off that option at the bottom of the soil test form. -ADI

Early Season Garlic Fertility

If you are a garlic grower and your ground is thawed, it's already time to start thinking about spring fertility. The most important time to apply nitrogen to a garlic plant in order to increase yield is right as the leaves begin to emerge from the ground. As soon as the ground is dry enough to work, side dress a soluble form of nitrogen such as fish emulsion or urea (incorporated in the soil so it is not lost as gas). You can apply half of your total N at this point (25-50 lbs/A), and you can apply the rest in about 3-4 weeks, when the garlic is 6 inches tall. Remember that since you are banding fertilizer, you can

reduce the acreage used in your calculation significantly to reflect the actual acreage you are applying fertilizer to. Also remember that your organic matter and slow-release N fertilizers such as alfalfa meal or incorporated legume cover crop will be breaking down in the spring, and will allow you to reduce the amount of fertilizer you need to apply now.

Nitrogen applied later in the growing cycle of garlic has very little if any effect on the final bulb size. The good news is we can spend less time fertilizing and more time on weed control! -CLS

Garlic	Nitrogen (N) Lbs/A	Phosphorus (P2O5) Lbs/A					Potassium (K2O) Lbs/A				
		Very low <3lbs/A	Low 3-6	Medium 7-13	High 14-40	Very High >40	Very low <50	Low 51-100	Medium 101-200	High 201-300	Very High >300
Incorporate at planting	0	200	150	100	50	0	200	150	100	50	0
Sidedress at emergence	25-50	0	0	0	0	0	0	0	0	0	0
Sidedress 1-2 times, 3-4 weeks apart	25-50 divided among sidedressings	0	0	0	0	0	0	0	0	0	0
TOTAL	50-100	150	100	75	50	0	150	100	75	50	0

Source: Cornell Recommendations for garlic, used by Agro-One Soil Lab. Based on use of a Morgan extract.

WPS Checklist for Organic and Conventional Farms

Be prepared for inspections this season by reviewing Worker Protection Standard (WPS) requirements now. All pesticide applications (anything with an EPA registration number), not just restricted use chemicals, applied on farms where there are employees must follow these rules. Organic applications (if they have an EPA registration number) are included in this.

Information at a Central Location

- Is the following information displayed where it is easily accessible and can be easily seen and read by workers before a pesticide is applied?
 - Pesticide-specific application information
 - Emergency medical information
 - Pesticide safety poster
- Does the pesticide application information include the following?
 - Location of treated area
 - Product name
 - EPA registration number
 - Active ingredient(s)
 - Time and date pesticide is to be applied
 - Restricted-entry interval (REI)
- Is the pesticide application information displayed until at least 30 days have passed since the pesticide was applied or REI has been in effect?

Training for Workers

- Have workers received complete WPS training prior to the sixth day of their entering any treated areas and every five years thereafter?
- Are EPA-developed or equivalent training materials used in training?
- Is safety information presented in a manner that workers can understand?
- Can you document that workers were trained?

Decontamination Supplies

- Is there at least 1 gallon of water available for each worker for routine washing and emergency washing of the entire body?
- Are there enough single-use towels and soap available?

- Are decontamination sites within ¼ mile of the work site?
- Are decontamination sites provided for 30 days following the end of the REI (7 days with REIs of 4 hours or less)?

Field Location, REI & Postings

- Have you provided treated site location and entry restriction information to hired commercial pesticide applicators when required?
- Are workers kept out of treated areas during the REI?
- Are workers who do early-entry tasks provided with personal protective equipment and training?
- Are workers given oral and/or posted warnings according to label requirements?
 - Are oral warnings:
 - Given in a manner that workers can understand?
 - Given that include the location of the treated area, the time during which entry is restricted, and instruction not to enter during the REI?
 - Are warning signs:
 - Posted at all usual entry points to treated areas?
 - Posted not more than 24 hours prior to treatment and removed within 3 days following the end of the REI?

Emergency Actions

- Is emergency transportation promptly available?
- Is the following information promptly available to medical personnel upon request?
- Product label information (all current labels & MSDS should be kept in a binder easily accessible and portable in an emergency and for OSHA inspections)
- Description of how the pesticide was being used
- Circumstances of worker's exposure to pesticide

This checklist is not all-inclusive. Please review your WPS handbook if you have questions (<http://www.epa.gov/pesticides/health/worker.htm>) or call Maire at 845-344-1234. It is mainly for field workers on produce farms. Other types of farms may have additional requirements. –MRU

Changes in Fumigation Requirements for Certified Applicators

The EPA has implemented new safety measures for soil fumigant pesticides. As of December 1, 2012, a final set of soil fumigant label changes went into effect for the **products methyl bromide, chloropicrin, metam sodium /metam potassium, and dazomet**. The new measures appearing on soil fumigant labels include buffer zones and posting, emergency preparedness and response measures, training for certified applicators supervising application, and Fumigant Management Plans.

As a condition of use, updated soil fumigant labels require certified pesticide applicators to successfully complete an approved training program. This training is being required because of an EPA review of soil fumigant labels. It is specific to new labels. If you have product that was bought before the change of the label wording, you do not need the training. If you are buying a soil fumigant product now, it will have

the new label requiring training. The training is needed every 3 years (as long as you are using fumigants) and is specific to each product. So for example, if you use metam sodium this season and take the training but next year decide to use dazomet, you will need to go back and add dazomet to your training. An EPA-approved training program for certified applicators using methyl bromide, chloropicrin, 1,3-dichloropropene, dazomet, metam sodium / metam potassium is available at: <http://www.fumiganttraining.com>. Applicators using dimethyl disulfide can find an approved training at <http://paladin.trainingmine.com>.

You can visit the EPA Office of Pesticides Programs' Soil Fumigant Toolbox at http://www.epa.gov/pesticides/registration/soil_fumigants/ for more information on the new requirements or call DEC Compliance Section at 518-402-8727. -TR

Sales opportunity for farmers' market vendors

ahead of the Summer market season – we have been called by the Hadley (NY) Business Association looking to recruit some more farm product vendors for their 9th Annual Maple Festival on April 27 & 28, 2013.

The festival takes place in downtown Hadley from 9 a.m. to 3 p.m. with a French toast breakfast, craft vendors and Train passengers.

There will also be boiling demonstrations of maple sap (held over frozen for the event). If interested, please visit www.hadleybusinessassociation.net for a vendor form and more information.

The event draws over a thousand people and they would like to showcase more local farm products (flowers, cheese, honey, jams, jellies or produce).

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Upcoming Meetings and Notices:

April 10th: Capital District Garlic School, 24 Martin Rd., Voorheesville. 10 a.m. to 2:30 p.m. The 2nd annual garlic school was rescheduled from March 19th to April 10th due to a snow-storm. If you would like to attend this new date and had not registered for the original school, there is still time to register! You can register online at cdvsfp.cce.cornell.edu in the meetings section, or call Crystal at 518.775.0018. The cost for the meeting is \$20 for growers in the ENY Horticulture area, and includes lunch. The theme for this year's school is "Health Soil Grows Healthy Garlic."

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use. No endorsement of any products is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

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