

Mycorrhizal Fungi: Beneficial Microbes for Increased Plant Health

Miranda Duschack, Small Farm Specialist, Lincoln University Ag Opportunities

Mycorrhizal fungi are important soil-borne organisms. According to Jeff Lowenfels, author of *"Teaming with Microbes: the Organic Gardener's Guide to the Soil Food Web,"* over 96% of plants form a relationship with beneficial fungi in the soil. At this year's Upper Midwest Organic Farming Conference in La Crosse, WI, Mr. Lowenfels presented on the crucial link between mycorrhizae, healthy soils and thriving plants.

Mycorrhiza is the term used to describe the relationship that exists between the plant and the mycorrhizal fungus. Like all symbiotic associations both the plant and the fungus survive better in union than alone. During the process of photosynthesis a plant synthesizes carbohydrates and proteins. Some of these nutrients leak out of its roots. These exudates attract and feed the fungi. The fungi in turn attract microscopic nematodes and protozoa that feed on the mycorrhizal fungi. The waste material from the microbes fertilizes the soil, thereby supplying nutrients to plant roots.



Root heavily infected with mycorrhizal fungi (note round spores at the end of some hyphae).

From Building Soils for Healthy Crops, photo by Sara Wright

According to Jeff Lowenfels an estimated 80% of plants have a symbiotic relationship with endomycorrhizal fungi. These are primarily annual plants, including the vegetables grown in our gardens and farms. Endomycorrhizal fungi burrow within the cellular membrane of the plant and form either balloon or tree like structures that begin in the plant and spread outward. A root will deplete the nutrients of the soil that it directly touches, but endomycorrhizal fungi spread out beyond the depletion zone and transfer nutrients to the plant. The fungi are particularly suited to transfer nitrogen and phosphorous. Tomatoes and corn, in particular, respond well to mycorrhizae with increased plant vigor and crop yields. Certain plant families have no known fungal associations with the mycorrhizal fungi. These include the Brassicas, such as cabbage, mustard, and some leafy greens, as well as related plants like spinach and beets.

Another function of endomycorrhizal fungi is the production of the sticky, glycoprotein called glomalin. Soil scientist Sara Wright, of the Sustainable Agricultural Systems Laboratory discovered glomalin in 1996; since then it has been identified as the key ingredient in creating soil aggregates, stable soil "crumbs." The fungi produce this "super glue" to seal its water and nutrient transport filaments. When it sloughs off the roots it sticks to soil particles and organic matter, creating soil aggregates. This stabilizes soil structure, improves water and root penetration, and reduces soil crusting. Glomalin provides nitrogen to soil, stabilizes soil pores to better hold water and for proper aeration, and reduces erosion." Furthermore, plants with

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healthy mycorrhizae are known to have higher drought tolerance. The endomycorrhizae increase the root surface of a plant resulting in greater access to water.

A healthy, abundant fungal network thrives in soils:

- High in organic matter;
- Well drained;
- Low to moderate in phosphorus; and
- Minimally tilled.

Fungicide applications can kill mycorrhizal fungi. Frequent tilling breaks up the soil structure diminishing aeration and drainage. Tilling also breaks apart the fungal networks. Mr. Lowenfels recom-

Hurricane Disaster Assistance Video

Maire Ullrich, CCE – Orange Co.

A video of the information meeting for farmers Sept. 8th in Goshen with FEMA, FSA (Farm Services Agency), Soil & Water Conservation Districts, Crop Insurance representation, Cornell, Farm Credit, etc. is available on the EDEN website: <http://emergencypreparedness.cce.cornell.edu/disasters/Pages/FarmerDisasterRelief.aspx>

The meeting covered agency assistance available to farmers for recovery from the hurricanes. This meeting was held in Orange Co. but the info will be the same in the counties with disaster designation. ■

mended using chemical fertilizer only when necessary, and then only slow release formulations with a Nitrogen-Phosphorus-Potassium ratio of 10-10-10 or below. If your practices meet these conditions then you may have higher populations of mycorrhizal fungi.

[From *Building Soils for Better Crops*, 3rd edition, Fred Magdoff and Harold van Es, "Mycorrhizal fungi help plants take up water and nutrients, improve nitrogen fixation by legumes, and help to form and stabilize soil aggregates. Crop rotation selects for more types of fungi than does mono cropping. Some studies indicate that using cover crops, especially legumes, helps maintain high levels of mycorrhizal spores and promotes good development in the next crop. Roots with lots of mycorrhizae are better able to resist root diseases, parasitic nematodes, drought, etc. Mycorrhizal associations stimulate the bacteria Azotobacter which produces growth stimulating chemicals." See the book at: <http://www.sare.org/Learning-Center/Books/Building-Soils-for-Better-Crops-3rd-Edition> C. MacNeil, CVP]

Mycorrhizal fungi and plants have grown in symbiotic association for millennia but remained a mystery until the 20th century. Scientists are gaining a better understanding of the basics of mycorrhizae and their important role in the soil food web. ■

Fellow Farmers Need Your Help!

NYS Farm Bureau

The results of recent Hurricane Irene and Lee have left many of our neighboring farms in great distress, especially in Eastern NY, parts of Central NY and the eastern Southern Tier. We are currently looking for donations of crops, feed to assist some of these farmers. Also needed are farmers who may be able to provide trucking. **FELLOW FARMERS NEED YOUR HELP!**

Any farmer wishing to assist in one way or another, please contact Bambi Baehrel, #9 Field Advisor, New York State Farm Bureau, who has agreed to coordinate this great effort. She has an inventory of the extensive needs of various farmers and is in the process of how best to assign gifts of aid and acts of kindness to the community of farmers in

need. To assist or for more information, please contact Bambi at 518-634-7852. ■

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Proposed Revision of Federal Child Labor Law

US Department of Labor

The Fair Labor Standards Act (FLSA) establishes federal child labor standards for both agricultural and nonagricultural employment. The agricultural child labor provisions have not been revised since the 1970s. After publishing a Final Rule addressing the nonagricultural provisions in May the Secretary of Labor announced her intention to undertake a similar regulatory initiative for hired farm worker children. The FLSA charges the Secretary of Labor with prohibiting employment of youth in occupations which she declares to be *particularly hazardous*. The Act establishes a minimum age of 18 for hazardous work in nonagricultural employment and 16 in agricultural employment. The Act also provides an exemption for a youth employed on a farm owned by his or her parent.

On September 2, 2011 DOL published a Notice of Proposed Rulemaking to update the agricultural child labor regulations based upon recommendations made by the National Institute for Occupational Safety and Health, its own enforcement experience, and to bring these rules in line with the rules that apply to children in nonagricultural workplaces. The major revisions proposed by the NPRM would:

- Require that all tractors operated by

14- and 15-year-old student-learners be equipped with rollover protection structures (ROPS) and seat belts, and that the student-learners use the seat belts.

- Remove the two certification programs that allow 14- and 15-year-olds, after receiving very little training, to operate most tractors and farm implements without supervision.
- Revise the type of farm implements 14- and 15-year-old student-learners may operate after completing the academic units addressing each type of implement.
- Revise and expand the current prohibitions against working with animals.
- Bring parity to the agricultural and nonagricultural child labor provisions by limiting farm work involving construction, communications, roofing, at elevations greater than 6 feet, and the operation of most power-driven equipment, etc.
- Prohibit all tasks that fall within the job of “pesticide handler” as determined by the EPA’s Worker Protection Standard.
- Prohibit the use of most electronic devices while operating power-driven machinery.
- A new Hazardous Occupations Order

involving the nonagricultural employment of children under the age of 18:

- Youth would be prohibited from working in farm-product raw materials wholesale trade industries such as country grain elevators, grain bins, silos, feed lots, livestock auctions, etc.

DOL invites comments on these proposals. Comments must be received by November 1, 2011. You may submit comments, identified by RIN 1235-AA06, either:

- *Electronically*: the Federal eRulemaking Portal: <http://www.regulations.gov> or
- *By Mail*: Wage and Hour Division, US Dept. of Labor, Room S-3502, 200 Constitution Ave, NW, Washington, DC 20210.

Instructions: All submissions must include the agency (Wage and Hour Division) and by the rule # RIN1235-AA06. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. For access to the docket go to the Federal eRulemaking Portal at <http://www.regulations.gov>. For info: Arthur Kerschner, Jr, Child Labor and Special Employment, Wage and Hour Division, US Dept. of Labor at (202) 693-0072. ■

Farm to School & October “Harvest Month”

Elizabeth Claypoole, CCE Wayne Co.

Food service managers are getting more interested in working directly with farms to source produce, especially during the month of October. October is designated “Harvest Month” in NYS. CCE Wayne Co. has been working with all of the county school systems on “Harvest Month.” There are active Farm to School programs in some other counties as well. We rely on connections with interested farms to sell local produce to schools and possibly make visits to schools. Several Wayne Co. fruit and vegetable

growers have participated in the past and we invite interested growers to learn more. If you are able and want to provide produce to schools, please let call. CCE Wayne Co. will act as an intermediary to initiate contact. The schools will contact growers directly. For more information contact Elizabeth Claypoole, CCE Wayne Co, at 315-331-8415 or eac9@cornell.edu. ■

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NEW! Fresh Connect Farmers Markets

NYS Dept. of Agriculture & Markets

Governor Andrew Cuomo today announced the "New York Fresh Connect Farmers' Markets" program, which launches new farmers' markets and expands others. The program is designed to assist New York farmers by increasing the sale of locally-grown food. The program will also bring fresh food to underserved communities and improve nutrition education. The FreshConnect program marks the first step in "Farm New York," the Governor's new initiative to invest in the state's agriculture, a vital component of the state's economy.

The Governor's Farm New York program is a strategy to maximize economic development and bring renewed investment to the agricultural sector of NY's economy. It includes programs to develop NY's regional farm-food system, increase access to credit for farm businesses, expand food processing capabilities, and capitalize on emerging technologies to lower energy costs and foster the growth of renewable energy sources. Farm New York is also expected to increase distribution of NY farm products and to improve the marketing of NY organic and NY grown foods.

In some places, new FreshConnect markets will serve rural or urban communities that do not have sufficient access to grocery stores; in others, markets will provide low-income, high-

unemployment neighborhoods with healthy, New York-grown produce, as well as jobs by staffing the markets with local youth. Other markets will provide residents and tourists with an array of New York farm fresh products.

A new market is being launched in Niagara Falls, and existing markets in other locations, including the North Tonawanda market, and mobile markets in Buffalo, Syracuse and Central NY, will deliver farm produce to senior centers and other central points of contact, and/or will accept EBT or food stamps for the first time. Other new markets or those expanding services are in: Utica, Sharon Springs, Mount Vernon, Harlem, Queens, the Bronx, Brooklyn and Nassau Co.

Under the program, the state provides, as needed: up to \$15,000 in funding per market; identify suitable markets; recruit farmers to participate; assist with marketing, promotion, nutrition education, community outreach; and coordinate with local officials and business groups.

To encourage greater consumption of fresh fruits and vegetables, each market will be assisted in redeeming Food Stamps and other nutrition incentives, such as Women, Infants, and Children (WIC) Fruit & Vegetable Checks, Farmers' Market Nutrition Program coupons, and Senior Farmers' Market Nutrition coupons. The state will also provide new "FreshConnect" checks, which are \$2 rebate checks for every \$5 in food stamps spent at a participating FreshConnect Farmers' Market.

A Sample of 2011 New York Fresh Connect Farmers' Markets

Buffalo Fresh Connect Mobile Markets (5), through Massachusetts Ave. Project Contact Tyler, Mobile Market Coordinator, at 716-882-5327 x6

Central New York Fresh Connect On-Line Market, through CNY Bounty at: http://cnybounty.com/CNY_Bounty/Home.html. Now accepting wholesale orders; home delivery coming soon

Main St. Fresh Connect Farmers' Market, through Niagara Falls Public Library N. Main St. and Niagara St, Niagara Falls. Thurs, 3:00 – 7:00 pm

North Tonawanda City Market's Fresh Connect EBT Program, through City of North Tonawanda. Open – see the June *Veg Edge Farmers Markets* edition

Syracuse Fresh Connect Mobile Markets (12), through Southside Interfaith Community Development. Open – see the June *Veg Edge Farmers Markets* edition ■

Ag Plastic Container Recycling

Farmers will be able to recycle their triple-rinsed plastic containers from agricultural crop protection products for FREE in October through the Genesee Co. Soil & Water Conservation District, in conjunction with USAg Recycling, Inc. To store containers until pickup, bags that hold about 50 2½ gallon containers are available for free. Acceptable items include: refillable plastic containers, 1-gal jugs to 55-gal barrels with recycling symbol #2; 250-gallon totes (cut up); and 5-gallon buckets. Metal, caps, booklets,

etc. must be removed. All containers must be empty, pressure rinsed or triple washed, and dry. For more info or to register for pickup, contact Elizabeth Bentley-Huber at 585-343-2362 or Elizabeth.bentley-huber@ny.nacdnet.net. ■



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Late Blight Update for Potatoes & Tomatoes

Carol MacNeil, CCE Cornell Vegetable Program

Since the last *Veg Edge Weekly* on 9/14 new confirmations of late blight (LB) have been reported in Wayne Co. potatoes and Monroe Co. tomatoes, and in gardens in Genesee, Chenango and Jefferson counties. There are now multiple confirmations from many counties, on both tomatoes and potatoes, though there are more reports on tomatoes. For updates and a summary map on the locations confirmed go to <http://blogs.cornell.edu/lateblight/2011/> for reports on NYS and surrounding states. Click on the date to see a map. Or go to <http://usablight.org/> for nationwide reports, a map. This site indicates the number of confirmations in the state. Both sites may report on Canadian outbreaks.

On Sept. 19th the Blitecast and LB Decision Support System (DSS) forecast the need for 5 – 7 day spray intervals in the 12 county Cornell Vegetable Program area depending on the weather in each location. See Blitecast details at: <http://newa.cornell.edu/> under Crop Pages, Tomato or Potato. Or get a LB DSS account and see more accurate info for your farm and varieties at: <http://blight.eas.cornell.edu/blight/>

Scout your crops frequently and carefully as long as there are ANY green leaves or stems left!! Especially check

wetter areas, areas adjacent to trees/hedgerows, where foliage takes a long time to dry in the morning, old cull piles, fields with volunteer potatoes or tomatoes, potato fields from suspect or non-certified seed, under power lines (regards aerial application), etc.


For good photos of LB on tomato and potato foliage, fruit and tubers go to <http://www.longislandhort.cornell.edu/vegpath/photos/index.htm> See Late Blight Imitators, then scroll down to Tomatoes or Potatoes, click on Late Blight.

If LB is observed in tomato or potato fields, or if fields are abandoned for ANY reason, destroy the foliage in LB hot spots and abandoned fields immediately to avoid leaving a place where LB can infect and multiply, putting other fields near and far at risk. In the case of LB hot spots kill an area at least 30 ft wide around the hot spot before going in to kill the hot spot. It takes 4-5 days after infection for LB lesions to become visible. Killing with a propane flamer or fast-acting burn-down herbicide are preferred methods, or disc down very well so green foliage is buried. Staked tomatoes can be cut at the ground surface and at 1 – 2 other spots up the main stem. Small areas can be securely covered with a black tarp, or plants can be buried or bagged. (Info from Meg


McGrath, Cornell)

If you think you may have LB immediately contact Carol MacNeil at 585-313-8796 or crm6@cornell.edu or John Gibbons at 716-474-5238 or jpg10@cornell.edu. Put 5 – 10 fresh, green, turgid, whole leaflets/stems with lesions in a dry plastic bag, seal, store at room temperature, and get to us ASAP/within 24 hours. We will get your sample to Bill Fry in Ithaca to determine what isolate it is, so the best fungicide can be chosen to control your outbreak.

For more detail about managing LB: <http://vegetablemdonline.ppath.cornell.edu/> Click on Newsletters, then scroll down to Potato or Tomato. There are Potato/Tomato Fungicide lists of all labeled products, and summarized Fungicide Rosters, as well as Fungicide Rosters with LB Ratings (top product is best against LB). There are also articles on Managing Late Blight Organically, and OMRI listed products with efficacy comments. ■



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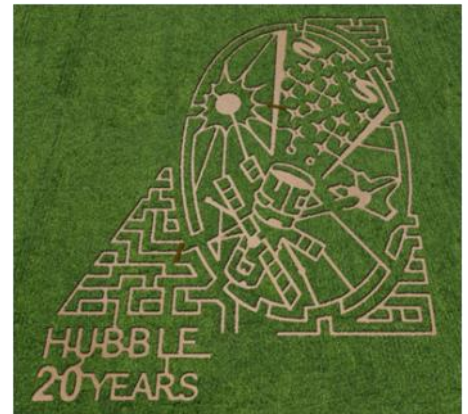
Liberty Ridge Farm Embarks on Space Farm 7 Mission

Laura McDermott, CCE Capital District Vegetable & Small Fruit Program

Liberty Ridge Farm is a popular agritourism farm in the Capital District. It is located 30 minutes north of Albany and features a 12 acre corn maze along with many farm grown products. This year, they were chosen as the northeast representative to pair with NASA in a special outreach titled Space Farm 7. This program will honor the U.S. space program as well as expose visitors to NASA space exploration and educate children across the US. The celebration is very timely as this year NASA celebrates the 50th anniversary of the first American in space, the 30th anniversary of the first Space Shuttle mission and the 20th anniversary of the Hubble Space Telescope's deployment in space.

NASA has ten regional research centers located in the US, each of which has a different responsibility. Liberty Ridge Farms is paired with Goddard Space Flight Center in MD to coordinate their leg of the program, featuring the Hubble Space Telescope in the corn maze. Games and activities will reinforce the educational missions of the space program so maze-goers can learn and have fun at the same time. Other activities proposed for the farm include traveling space displays, NASA sponsored activities, an astronaut visit, and a contest where the winner can win an opportunity to dine with an astronaut along with a trip to the Kennedy Space Center.

"We are honored to be chosen to be part of this program," said Cynthia Gifford, owner of Liberty Ridge Farm. "Not only do we get to collaborate with other farm operators across the nation in a unified effort to entertain and educate families, we are also going to be part of history in paying tribute to NASA." Liberty Ridge Farm made a request for an Astronaut to visit the farm during the first weekend in October, coinciding with their 'All About Scouts' Weekend.



Corn maze with Hubble Telescope theme at Liberty Ridge Farm

Other participating farms include are in Fredericksburg, VI; Rock, GA; Gretna, NE; Brookshire, TX; Lehi, UT and Lathrop, CA. All are associated with The MAiZE Inc, the world's largest maze design company. ■

Pre-Planting Considerations for Garlic

Crystal Stewart, CCE Capital District Vegetable & Small Fruit Program

Garlic planting is under way across the state, and despite a good harvest across most areas this year we continue to receive many questions about proper pre-planting treatment of seed to prevent diseases and bloat nematode. Growers are more likely than ever to take a hard look at what they are buying or saving for seed, which is a very positive development from a disease control standpoint. Discarding suspect seed now saves growers money, labor, and time later. Here are some things to consider as you go through your seed garlic and ready your garlic field this year.

Seed Selection:

Most of you should already have your seed at this point, but make sure that you still grade hard while cracking the bulbs before planting. Don't just examine each bulb, examine each clove, since some diseases such as neck rots can be

present on the inside edge or bottom of the clove and will not be detectable from the outside of the bulb. Remove any cloves that have signs of disease or are damaged in any way. Try to select cloves that are medium to large. However, if you are having any trouble with harvesting bulbs that contain just one clove, try to remove the very largest cloves from your seed stock this year, since sometimes extremely large cloves will not make new bulbs with individual cloves. This can also occur due to excessive cold.

Seed Treatments for Garlic:

A few seed treatments are available to suppress diseases and nematodes in garlic. However, none of these treatments have been demonstrated to be 100% effective by research at Cornell or other universities. Suppression of diseases and nematodes has been demonstrated.

Hot water treatment: Many organic growers are considering using hot water treatments, which are popular in western states. The key difference between our systems and theirs is scale—they have very large, very precise hot water treatment systems, which makes effective treatment much easier. If you do want to try a hot water treatment, make sure that you have a significant enough volume of water that when you add the garlic you will not have a large temperature drop. The timing of treatments and the temperatures need to be very precise, or they will either be ineffective or will cook your garlic, which will lead to stunting or death of seed. Invest in a couple of very good quality thermometers and check them against each other at the treatment temperature. If they differ use the average of the two.

The standard treatment for nematodes

Continued on page 8

is a 30-45 minute warming period at 38°C (100°F) followed by exactly 20 minutes at exactly 49°C (120°F) with a cooling period of 10-20 minutes at 18-22°C (64-72°F). Crack off seed cloves prior to treatment, and plant as quickly as possible after treatment. Research examining adding bleach to the hot water treatment (Roberts and Matthews, 2005) found that addition of 1.05-2.6% sodium hypochlorite (a.i. in bleach) during the hot treatment were consistently effective for controlling bloat nematode. However, it does not appear that this treatment is OMRI approved, since bleach is not allowed to contact organic produce, only to disinfect equipment.

Vydate (nematode suppression only): This restricted-use nematicide has received a 24(c) label for use in garlic in New York for use on bloat (stem and bulb) nematode. It can be used as a broadcast application at a rate of 2 gallons per acre with a minimum of 20 gallons of water within one week of planting, or as an in-furrow treatment at the rate of 3/4 to one gallon per acre in a drench with 100-150 gallons water or 1.5-2 gallons per acre in 20 to 50 gallons water as an in-furrow band spray at planting. The Vydate must be incorporated by water or mechanically to 4-6 inches. Dr. Abawi has been trialing the use of Vydate for bloat nematode suppression in the greenhouse, and his initial findings were very promising.

Pre-planting fertilization:

Aside from starting with quality, disease-free seed, the most important thing you can do to ensure a good garlic harvest next year is start with good soil with adequate fertility. A loose, well drained soil is ideal for garlic. Heavy clay soils and soils with poor drainage are known to produce poorer stands with more disease problems. Ideally, your garlic field was chosen well in advance, and has been prepared using cover crops and/or weed control techniques that will benefit your garlic crop.

After selecting your field, review your soil test results. The fertility table (below) from the New England Vegetable Management Guide provides guidelines for pre-plant and in-season fertility. If possible use an organic source of Nitrogen such as alfalfa meal this fall, or you can rely on N from a recent cover crop. The garlic only takes up a little N in the fall, since most growth should be taking place in the roots.

Garlic Fertility Requirements

Garlic	Nitrogen (N) Lbs/A	Phosphorus (P2O5) Lbs/A					Potassium (K2O) Lbs/A				
		Very Low	Low	Medium	High	Very High	Very Low	Low	Medium	High	Very High
Incorporate at planting	40	150	100	75	50	0	150	100	75	50	0
Sidedress at 6" tall	40	0	0	0	0	0	0	0	0	0	0
Sidedress 3-4 weeks later*	40	0	0	0	0	0	0	0	0	0	0
TOTAL	120	150	100	75	50	0	150	100	75	50	0

*Do not apply any N fertilizer after bulb initiation has begun. This could reduce yield.

Sources:

New England Vegetable Management Guide, Garlic Chapter.

<http://www.nevegetable.org/index.php/crops/garlic?start=3>

Disinfection Alternatives for Control of Ditylenchus dipsaci in Garlic Seed Cloves. Roberts, P.A and Matthews, W.C. Journal of Nematology, 27(4): 448-456. 1995 ■

Diseases to look for on garlic seed:

The following diseases are seed-borne, and will persist or multiply in your field if not culled. Check each clove carefully, and discard suspect cloves. If a bulb has widespread Penicillium, Botrytis or Fusarium, it may be better to discard the entire bulb than to crack it searching for quality cloves. Some diseases' spores, like Penicillium, may spread by air when disturbed.



Image: Melodie Putnam, Oregon State

Penicillium (blue mold) will persist on seed from year to year.



Image: Oregon State

Small Fusarium lesions. Fusarium may persist in soil or on seed.

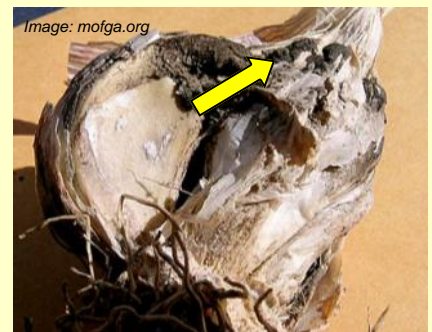


Image: mofga.org

Botrytis porri on garlic may persist on seed or as sclerotia (see arrow) in the soil



Image: omafra.gov.on.ca

Garlic bloat nematode damage. Notice the irregularly absent roots. Remaining roots are intact and disease free. Soft rots and other secondary pathogens may be present.



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Harvesting & Storage Sweet Potatoes

*Sandy Menasha, CCE Suffolk Co.,
9/15, LI Fruit & Veg Update*

Sweet potatoes should be harvested before soil temperature drops to 50 degree F in order to prevent injury. It is best to dig sweet potatoes when the soil is dry making it easier to handle the roots. Soon after digging, sweet potatoes should be cured to help heal any wounds. This is necessary for successful storage. Cure for 7-14 days at a temperature of 80 to 90 degrees F with relative humidity at about 85 to 90 percent. Store sweet potatoes in a warm building where the temperature will be uniform. The curing room may also be the storage room if conditions are right. Temperature during storage should be kept as close to 55 degrees F as possible. The roots can deteriorate rather quickly if temperatures drop below 50 degree F. It is also important to ventilate the storage room, at least one air exchange per day, especially if temperatures rise above 60 degrees F in order to prevent loss. ■



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<http://cvp.cce.cornell.edu>

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* Member of the Cornell Vegetable Program Administrative Management Team

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CVP Region Berry Program

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Contact the Capital District Vegetable & Small Fruit Program

Capital District Vegetable and Small Fruit Program (CDVSFP) Specialists



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Columbia: John Altobelli, Bryan Samascott,
Jody Bolluyt (organic)
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Greene: Pete Kavakos, Jr. and Jim Story
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Schoharie: Bob and Linda Cross, and Jake
Hooper
Washington: George Armstrong and Rich
Moses
Warren: Kim Feeney
Industry Representatives: Jay Matthews and
Paul Peckham

*If you have questions or comments about
this publication or the Capital District
Program in general, please contact your
county's grower advisory member or the
Agricultural Program leader of your local
Cornell Cooperative Extension office.*



Dates to Remember...

November 7-8 - 2011 Cornell Agribusiness Strategic Marketing Conference, *Capitalizing on Group Action & Alliances to Improve Marketing Returns*, Hyde Park, NY. Innovative ag marketing to capitalize on the benefits of group action and business alliances to benefit smaller-scale producers and processors, and new agricultural cooperative development. The agenda will soon be at: <http://marketingpwt.dyson.cornell.edu>

December 2 - Processing Sweet Corn and Snap Bean Advisory Meeting, 9:30 – 11:30 am, Jordan Hall Lounge, 2nd floor, NYS Ag Experiment Station, 630 W. North St, Geneva, NY. Contact: Julie Kikkert, CCE, CVP at jrk2@cornell.edu or 585-394-3977 x404.

December 13 - Pea, Beet and Carrot Advisory Meeting, 9:30 am – 12:00 pm, First United Methodist Church, 8221 Lewiston Rd (Route 63), Batavia NY. Contact: Julie Kikkert, CCE, CVP at jrk2@cornell.edu or 585-394-3977 x404.

January 24-26 - Empire State Fruit and Vegetable Expo, Farmers' Direct Marketing Conference & Becker Forum, Oncenter Convention Center, Syracuse; *Becker Forum, January 23, 2012 at Holiday Inn Liverpool* Visit <https://nysvga.org/expo/> for information and on-line registration.

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