

## Immigration Reform Passes U.S. Senate Committee

The United Fresh Produce Association applauds the Senate Judiciary Committee for approving the comprehensive immigration bill by a strong, bi-partisan vote of 13 to 5 on May 21. The bill is expected to be taken up by the full Senate in June when Congress returns from the recess.

Nearly 300 amendments were proposed to the overall immigration package, but no changes were made to the new agriculture worker program, which provides for a new, market-based federal program to ensure a steady and experienced agriculture labor force. The new agricultural workforce framework was developed through negotiations between the Agriculture Workforce Coalition, of which United Fresh is a founding member, key senators and agriculture labor.

The new program allows current, experienced agriculture workers to stay in the U.S. while adjusting to legal status. It also establishes a future workforce program, which provides employers and employees with flexibility through either an "at-will" or contractual arrangement under a three-year visa program. The new proposal also allows for a transition period from the current H-2A guest worker system to the new program to ensure that employers will not face gaps in program availability and resulting workforce shortages.

"We are pleased the Senate Judiciary has moved forward with committee passage of the bill. The strong bi-partisan vote out of the committee should send a positive signal to the rest of the Senate and their colleagues in the House that the time has come to address this important policy issue that has lingered on much too long in the eyes of many people in the produce industry," said Robert Guenther, senior vice president of public policy. "Now is the time for every United Fresh member to make his or her voice heard on Capitol Hill about this crucial industry need."

PVGA members can visit United's Grassroots Action Network website at <http://capwiz.com/unitedfresh/home/>, where they can quickly send a message to their lawmakers to ask for support of the immigration reform bill.

United Fresh continues to advocate passage of immigration reform and agricultural workforce provisions by the full Senate, as well as by the House of Representatives later this year.

*From United Fresh Member Update, United Fresh Produce Association, May 22, 2013.*

## High Tunnel Tax Exemption Passes State Senate

This winter the Pennsylvania Landscape and Nursery Association (PLNA) reported to the Pennsylvania State Council of Farm Organizations that some of their members were being charged real estate taxes on their high tunnels. While most county assessors have not considered high tunnels taxable structures, some counties were assessing growers for these "buildings". Several members of the State Council, including PVGA, met with Michael Rader from the Senate Agricultural and Rural Affairs Committee staff regarding this issue. PVGA Directors also discussed this issue with Senators Elder Vogel and Judith Schwank, the majority and minority chairs of the Senate Ag Committee respectively on March 13, 2013, during their visits with legislators. Senator Vogel and 18 other senators introduced on March 15 Senate Bill 638 that specifically exempts high tunnels from real estate taxes. On May 1, 2013, the Senate passed the bill 49 to 0 sending it to the House for consideration.

Meanwhile, Gregg Robertson with PLNA is working with Kerry Golden on the staff of the House Agricultural and Rural



Affairs Committee and Rep. John Maher, Committee chair, on similar bills that address not only the real estate tax issue but also statutory exemptions of high tunnels from the sales tax and from the Uniform Construction Code.

The Senate bill defines a high tunnel as a covered agricultural structure which meets the following:

- (1) Is used for the production of commodities, including any of the following:
  - (i) Growing, processing or storing agricultural products.
  - (ii) Shelter for the sale of agricultural products.
  - (iii) Housing livestock.
  - (iv) Storage of agricultural waste, equipment and other material used in agricultural production.
- (2) Is constructed consistent with all of the following:
  - (i) Has a metal, wood or plastic frame.
  - (ii) Has a plastic, woven textile or other flexible covering.
  - (iii) Has a floor made of soil, crushed stone, matting, pavers or a floating concrete slab.
  - (iv) Requirements determined by the Department of Revenue in consultation with the Department of Agriculture.

Hopefully both houses will pass bills exempting high tunnels real estate taxes, sales taxes and the Uniform Construction Code. Let your legislators know you support these bills.

## NEWS



**Pennsylvania  
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## Vegetable Field Day Set for August 6

Vegetable growers need to save Tuesday, August 6, 2013 for this year's PVGA Field Day. This is your opportunity to see the latest applied research and new equipment up close in the field. Projects this year include: Pathenocarpic High Tunnel Cucumber Variety Trial, Roma/Paste Tomato Variety Trial (Field and High Tunnel), Field Cucumber Variety Trial, Sweet Corn Variety Trial, Tomato and Bell Pepper High Tunnel Economics Trials, Managing Late Blight with Host Resistance on Tomatoes with Forecasted Fungicide Applications, New Fungicides for Timber Rot in Tomatoes, Managing Bacterial Diseases of Onions, Managing Brown Marmorated Stink Bugs in Bell Peppers, and much more, including the Flower Variety Trials with more than 1,100 of the newest varieties of annual flowers. Look for more information coming in next month's issue.

## PVGA Directors Approve Actions

The Association's Board of Directors met in Harrisburg on March 13, 2013, in conjunction with the Association's legislative visitation day. A quorum was not present for the meeting so the motions were voted on in the mail ballot distributed after the meeting to all the Directors.

The Board voted to approve the minutes of the January 28, 2013, meeting and the current financial reports.

They also voted to renew the contract for administrative services with Troxell Administrative Services for an annual fee of \$59,000, an increase of \$2,000 over last year. The contract amount covers providing the Association with office space, computer and office equipment, and storage space as well as the Executive Secretary's service and additional hired clerical help. Recognizing the administrative time devoted to the Simply Sweet Onion program, the Board voted to require the Simply Sweet Onion Committee to pay \$995 to the Association's General Fund to help cover this cost.

The Directors gave the Association's bank account signatories permission to authorize ACH payments only for monthly sales tax payments and transfers to investment accounts.

The Board officially endorsed the effort by certain members of the Pennsylvania State Council Farm Organizations to have legislation enacted to exempt high tunnels from real estate taxes and sales taxes as well as the Uniform Construction Code. They had presented this need to legislators earlier in the day.

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*The Pennsylvania Vegetable Growers News is the official monthly publication of the Pennsylvania Vegetable Growers Association, Inc., 815 Middle Road, Richfield, PA 17086-9205 phone and fax - 717-694-3596, email - [pvga@pvga.org](mailto:pvga@pvga.org) website - [www.pvga.org](http://www.pvga.org)*

*Our Mission:*

*The Pennsylvania Vegetable Growers Association serves Pennsylvania's commercial vegetable, potato and berry growers through education, research, advocacy and promotion.*

*Our Vision:*

*The Pennsylvania Vegetable Growers Association will be the driving force in ensuring the future viability of the commercial vegetable, potato and berry industries in Pennsylvania.*

*Inquiries about membership, this publication or advertising rates should be directed to William Troxell, Executive Secretary, at the above addresses.*

## Fruits and Vegetable Priorities Advance in Farm Bill

The House and Senate Agriculture Committees took major steps in moving forward legislation that will reauthorize the 2008 Farm Bill this year. The Senate Agriculture Committee passed the *Agriculture Reform, Food, and Jobs Act of 2013*. Yesterday, the House Agriculture Committee passed the *Federal Agriculture Reform and Risk Management Act of 2013*. Both bills are slated to begin consideration on the Senate and House floors over the next several weeks.

As a member of the Specialty Crop Farm Bill Alliance, the United Fresh Produce Association worked closely with the House and Senate to secure support for a number of important fresh fruit and vegetable programs. Both bills include key specialty crop industry priorities such as research, pest and disease mitigation, trade, nutrition, and other programs that enhance the ability of producers to be competitive and meet the needs of American consumers. Highlights of the bill include:

Both bills include important policy changes including a feasibility study of providing risk management for those adversely affected by food safety recalls, provisions that require more transparency and oversight on crop insurance for specialty crops, and the ability to develop sound new and innovated policies for addressing risk management challenges. Conversely, we continue to be concerned with conservation compliance linkage, planting flexibility provisions, and the House Farm Bill

which undermines the integrity of the Fresh Fruit & Vegetable Program (FFVP).

"We are grateful to the Senate and House Agriculture Committees moving forward with this legislation and supporting agriculture reform," said Robert Guenther, United Fresh senior vice president of public policy. "Both bills support fruits and vegetables in ways that will boost consumption and help provide healthful options to Americans – through block grants, nutrition programs and pest and disease research. We're looking forward to working with Congress to move these bills forward to final consideration this year."

As these bills continue to move forward over the summer, United Fresh will be calling on its members to contact their elected officials and urge them to support these important investments in the fruit and vegetable industry.

*From the United Fresh Produce Association.*

Program	House (Per Year)	Senate (Per Year)
Specialty Crop Block Grants	\$72.5 - \$85 million	\$70 million
Specialty Crop Research Initiative	\$50 - \$65 million	\$25 - \$65 million
Coordinated Plant Management Program	\$62.5 - \$75 million	\$60 - \$65 million
Market Access Program	\$200 million	\$200 million
TASC Program	\$9 million	\$9 million
Fresh Fruit and Vegetable Program	\$150 million	\$150 million
<b>TOTAL Per Year Investment</b>	<b>\$584 million</b>	<b>\$559 million</b>

## National News Briefs

### AFBF Presents its Farm Bill Plan to Congress

The American Farm Bureau Federation has presented Congress with a Farm Bill proposal that trims \$23 billion in federal spending, while still strengthening crop insurance for producers.

AFBF's proposal seeks to find a level of fairness among regions and commodities, giving producers access to the same types of safety net programs. The proposal also recognizes the current fiscal constraints the nation faces, and saves \$23 billion compared to the cost of continuing current programs.

Congress failed to adopt a new Farm Bill last year and instead voted to continue the 2008 Farm Bill until September.

Farm Bureau's proposal:

- Offers farmers a choice of program options, while not reducing federal crop insurance funding.

- Provides a commodity title that encourages farmers to follow market signals, instead of anticipating government payments.

- Refrains from basing any programs on the cost of production.

Farm Bureau's proposal supports programs that reduce complexity and supports a safety net that allows farmers to purchase insurance to further protect against risk.

AFBF supports a three-legged safety net for crop farmers that include: a stacked income protection plan, or STAX, an improved crop insurance program, and target prices and market loans. Under AFBF's plan, all crop farmers would have access to the marketing loan and crop insurance provision, and could select between a target price program or STAX for their safety net option.

Because of budget limits, AFBF's proposal calls for reducing the crop insurance premium subsidization to 70 percent, from 80 percent, not offer the multiplier option, not offer a harvest price option, and allow purchase only as a buy-up policy

with a 10-25 percent deductible, rather than also providing for a stand-alone policy.

The American Farm Bureau Federation is asking Congress to provide new Farm Bill programs for fruit and vegetable farmers.

Barry Bushue, AFBF's vice president, told Congress that lawmakers should expand programs normally available only to the growers of corn, soybeans and wheat to those who raise specialty crops. Specialty crop production is responsible for 17 percent of the \$391 billion in agriculture cash receipts, according to Bushue.

Farm Bureau has proposed the extension of a new program—Stacked Income Protection Plan, or STAX—for growers of corn, soybeans and wheat, along with apples, potatoes, tomatoes, grapes and sweet corn. "It is designed to complement existing crop insurance programs. It does not change any features of existing insurance policies," Bushue said.

The five specialty crops in the Farm Bureau proposal for STAX coverage rank in the top 13 in value of production. Farm Bureau is also asking Congress to continue current programs for producer growers include farmer's market promotion and farm-to-school initiatives.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

### Pennsylvania Farm Bureau Sends its Small Business Tax Suggestions to Congress

As a select group of representatives weighs possible changes to the federal tax code, Pennsylvania Farm Bureau sent suggestions on reforms that could benefit small businesses.

PFB sent a letter to Rep. Allyson Schwartz, (D-Montgomery County), who is serving on a committee looking at small busi-

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**National News Briefs** *(continued from page 3)*

ness tax reform. That group will give its suggestions to the Ways and Means Committee.

Among the issues Farm Bureau wants to see addressed are:

- Replacing the current federal income tax with a fair and equitable tax system that encourages success, savings, investment and entrepreneurship.
- Any tax reform must include individual and corporate tax reform. Additionally reforms must include the continuation of unrestricted cash accounting for farmers who file as individuals.
- Lowering the capital gains taxes.
- The elimination of estate taxes. With the value of agriculture lands increasing, more and more farms are exceeding the exemption value for estate taxes.

The Congressional sub-committee is expected to develop a list of recommendations for consideration by the full Ways and Means Committee.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**State News Briefs****Landowner Liability Bill Advances and PFB Gains Support Against Narrowing Safety Zones**

Pennsylvania Farm Bureau recently worked with lawmakers on two bills before the Senate Game and Fisheries Committee, one that would limit landowner liability, and another that would narrow the safety zone for trapping on private property.

PFB urged lawmakers to support the landowner liability bill, which would exempt landowners from responsibility when hunters commit a Game Code violation on their property. Farm Bureau also asked lawmakers not to support a bill that would have allowed trappers to place underwater traps within 50 yards of occupied properties without the permission of the landowner. The current safety zone is 150 yards.

The Senate Game and Fisheries Committee passed the landowner liability bill and tabled action on the trapping legislation.

The landowner liability bill now heads to the full Senate for their consideration.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**Pennsylvania Farm Bureau Files Brief in "Right to Farm" Case**

Pennsylvania Farm Bureau recently filed a "friend of the court" brief in support of the York County Common Pleas Court's application of the state's Right to Farm Law (RTFL) to dismiss a nuisance lawsuit brought against farmers by neighboring residents. The lawsuit involved the use of biosolids for soil and nutrient enhancement of fields.

In their appeal to Superior Court, the residents are calling for interpretations of the Right to Farm Law that would seriously restrict the protection from nuisance lawsuits the law provides to farm families.

**USDA Announces Specialty Crop Block Grant Funds**

The Department of Agriculture has announced the availability of approximately \$52 million in Specialty Crop Block Grant SCBG funds for the 2013 fiscal year to solely enhance the competitiveness of specialty crops. The funds are authorized by the extension of the 2008 Farm Bill and can be used for projects that enhance all aspects of growing and marketing specialty crops including research, plant and pest health, food safety and production.

"This program is valuable in helping the fresh produce industry remain competitive and I would encourage producers to apply," said Robert Guenther, United Fresh senior vice president of public policy. "We're working hard to ensure that these resources are included in the 2013 Farm Bill and continue to be available to our members."

State departments of agriculture or other interested stakeholders interested in obtaining grant program funds are invited to submit applications to USDA. The Pennsylvania Vegetable Marketing and Research Program has received several Specialty Crop Block Grants over the past several years through the state Department of Agriculture enabling it to expand its promotions efforts.

*From Inside United Fresh, United Fresh Produce Association, May 9, 2013.*

"The Right to Farm Law's protection from neighbors' nuisance suits would essentially become meaningless," said John Bell, PFB's Governmental Affairs Counsel. "Changes that farmers routinely make in their daily operations to maintain or improve farm viability, such as crop rotation, adopting conservation tillage or no till practices, using a different fertilizer, planting short-season crops, or use of advanced production techniques, would become 'substantial changes' making farmers vulnerable to nuisance lawsuits by local residents."

The brief filed by Farm Bureau argued that the neighbor's interpretations of the law seriously contradict the objectives of the Right to Farm Law and other state laws designed to protect a farmer's efforts to manage their farms.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**Reichart Promoted to Bureau Director**

On Friday, April 5, Frank Jurbala retired as Bureau Director from the Bureau of Market Development, Department of Agriculture. Upon Frank's retirement, the Department promoted PVGA member Lela Reichart as Bureau Director. Lela has over 20 years of agriculture marketing experience and joined the Bureau of Market Development in 2008 and has served as the Agricultural Marketing Division Chief for three years.

Lela will continue to be the designee for the Secretary of Agriculture for the Commodity Programs (PA Wine Marketing and Research Program, PA Vegetable Marketing and Research Program, PA Peach and Nectarine Research Program and PA Potato Research Program).

**Ag Lab Continues its 10th Anniversary Celebration**

Pennsylvania Friends of Agriculture Foundation's successful Mobile Agriculture Education Science Lab program celebrat-

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**State News Briefs** *(continued from page 4)*

ed its 10th anniversary with an event in York County. The Foundation held a press event at South Eastern Middle School West where students and teachers spoke about their experiences inside the lab. Members of the media were also given the chance to observe a lesson inside a mobile ag lab at the school. Jeff Halterman, who teaches science at the middle school, said students look forward to lessons inside the lab. "The students enthusiastically embrace these lessons and come away with a new learning experience," he said. The mobile ag lab program started with one lab, but has grown to a fleet of six that allows the Foundation to reach nearly 90,000 students a year. The ag labs provide science-based agriculture learning, with lessons designed for specific grade levels. In the 10 years since the program began, more than half a million students have gone through an ag lab lesson.

*From Farm Bureau Express, Penna. Farm Bureau, April 26, 2013.*

**Bill Seeks To Abolish Turnpike Commission**

A bill introduced by Reps. Donna Oberlander (R-Clarion) and Mike Vereb (R-Montgomery) would abolish the Pennsylvania Turnpike Commission and move all operations to the Pennsylvania Department of Transportation.

The bill is in response to an ongoing criminal probe into management of the turnpike, and the need to eliminate inefficiencies in state government. PennDOT currently manages more roadway miles, with fewer executives than the Turnpike.

"There is absolutely no reason why Pennsylvania taxpayers should be forced to foot the bill to have two government

organizations dealing with transportation issues," Oberlander said.

The bill was referred to the House Transportation Committee.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**Senator Introduces Transportation Funding Bill**

The chairman of the Senate Transportation Committee has introduced a transportation funding bill that would raise fees and also lift a tax paid on the wholesale price of gasoline.

Sen. John Rafferty (R-Montgomery) introduced the bill, which calls for increasing the fees on licenses and vehicle registrations, along with lifting the Oil Franchise Tax. The move is an attempt to inject more money into Pennsylvania's crumbling highway infrastructure.

Many of the changes called for in this bill expand recommendations Gov. Tom Corbett laid out in his budget address in February. Rafferty's bill would bring in an additional \$2.5 billion in funding for the state transportation infrastructure, including ports and railways.

Pennsylvania's unmet transportation needs stand at around \$3.5 billion. The state has more structurally deficient bridges than any other state in the nation, and more than 44,000 miles of roads in poor condition.

Closed bridges and poor highways can have a negative impact on farm operations, causing costly detours and delays.

Rafferty's funding proposal called "The Bridge to

*(continued on page 6)*

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**State News Briefs** *(continued from page 5)*

Pennsylvania's Future" closely aligns with recommendations reached by Gov. Corbett's Transportation Funding Advisory Commission, which examined the state's transportation needs and funding options.

Rafferty's bill would phase out the price cap on the Oil Company Franchise Tax over a three-year period. It will also reduce by 17 percent the flat tax paid by consumers, over a two-year period. It also:

Moves to a six-year driver's license from a four-year driver's license. Fees would be increased to \$50.50

Replaces annual registration with a two-year registration. Fees would be increased to \$104. Registration stickers would be eliminated.

Drivers who violate traffic laws would pay a \$100 surcharge to be invested in transportation.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**Time for Well Water Checkup**

Spring is a good time for farmers to test their well water, before the start of peak demand.

The American Farm Bureau Federation, in partnership with the National Ground Water Association, reminds well water owners of the value of a yearly checkup by a qualified water well contractor. Doing so each year is the best way to ensure problem-free service for the year ahead. Plus, preventative maintenance usually costs less than emergency repairs.

About half of the nation relies on well water, and Pennsylvania is no exception. During inspections, qualified professionals will perform flow tests, sanitary inspections, and testing of water quality for coliform bacteria, nitrates and any other matters of local concern, such as iron and manganese.

For more information visit: [www.ngwa.org](http://www.ngwa.org).

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**Pennsylvania to Spray for West Nile Control**

Last year was a record for the number of West Nile cases in Pennsylvania. Due to the mild winter and early spring, West Nile cases exploded in Pennsylvania, with a record number of human cases of the virus. West Nile virus can cause encephalitis in some cases.

Southeastern Pennsylvania, including Delaware, Philadelphia and Montgomery counties, led the state in the number of human cases of West Nile. York and Adams counties also had high numbers of cases uncovered as part of the state's surveillance program.

To help combat spread of the disease, Pennsylvania is again planning to spray to help thwart mosquito populations.

The Pennsylvania Department of Environmental Protection has awarded nearly \$2.2 million in West Nile Control grants. Counties will be able to use the money to cover the cost of new spray equipment or other eradication methods.

DEP staff will start surveillance work this month. DEP uses a combination of sprays and larval control products to reduce mosquito populations.

Here are some tips that homeowners can follow to reduce mosquito populations around their property:

Dispose of tin cans, plastic containers, ceramic pots or similar water-holding containers that have collected on your property.

Pay special attention to discarded tires. Stagnant water in tires are where most mosquitoes breed.

Drill holes in the bottom of recycling containers left outdoors.

Have clogged roof gutters cleaned every year, particularly if the leaves from surrounding trees have a tendency to plug up the drains. Roof gutters can produce millions of mosquitoes each season.

Turn over plastic wading pools when not in use. Stagnant water in a wading pool becomes a place for mosquitoes to breed.

Turn over wheelbarrows and don't let water stagnate in birdbaths. Both provide breeding habitats for domestic mosquitoes.

Aerate ornamental pools or stock them with fish. Water gardens can become major mosquito producers if they are allowed to stagnate.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

**RULE Recruiting New Class**

The Pennsylvania Rural-Urban Leadership Program (RULE) is seeking candidates for its next class.

RULE provides leadership opportunities for Pennsylvanians from all across the commonwealth. The program focuses on personal and professional growth and a greater understanding of the rural and urban issues affecting the state.

RULE is a program of the Pennsylvania State University's, College of Agricultural Sciences.

Bruce Latshaw, a dairy farmer from Berks County who is currently enrolled in the program, said RULE has allowed him to grow professionally. The current RULE class is comprised of a diverse group of people, he said.

"It is an unbelievable networking experience," said Latshaw, who is also a township supervisor. "I have found a family away from family."

RULE is seeking nominations for the next class of candidates. You can nominate yourself, or another applicant. Application material will be sent to prospective candidates this summer.

Interviews will take place in the fall in State College.

To learn more about RULE visit [www.rule.psu.edu](http://www.rule.psu.edu).

Questions can be directed to Tara Homan at [tstine@psu.edu](mailto:tstine@psu.edu) or 814-863-4679.

*From Pennsylvania Agricultural Alliance Issues Update, Penna. Farm Bureau, May 2013.*

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## Social Media Boot Camp for Ag Businesses Offered in Philadelphia

Social media tools are an exciting way to enhance your farm business's marketing activities, allowing you, the owner, or manager, to connect directly with your audience. While a social media presence is almost expected of many businesses, many owners struggle with how to use the various tools to connect.

Whether you direct market your farm products and want to quickly and efficiently communicate with your customers or you just want to share your farm's story with your neighbors and community, social media can serve as a powerful tool.

During this two-day boot camp, we'll discuss the basics of several tools such as Twitter and Facebook and get you thinking about their strategic use.

The first day of the workshop will be spent in a computer lab where you will begin developing your Facebook, Twitter, and foursquare pages.

On the second day you will develop social media goals and objectives, a strategy for achieving those, and be introduced to tools for measuring and analyzing your social media impact. You'll also hear from a small business owner on their use of social media tools.

**Who Should Attend?** Ag entrepreneurs and small business owners/managers considering developing their social media marketing and existing business owners who want to develop an effective social media marketing strategy.

**Participant Prerequisites** - Must have a level of computer and internet familiarity such that you can find information using a search engine (Google, Bing, etc.) on the web and be able to upload and download photos and other file types.

**Other Important Information** - If registering for Day 1, please bring a portable drive containing photos of you, your

farm/business, logos, products, etc. for use in developing your social media profiles. **Space is limited. Register early at** <https://www.cvent.com/events/social-media-boot-camp-for-ag-businesses-philadelphia/registration-325b774cb5914771a34ad934f4b01403.aspx>

The Boot Camp will be held on June 12 and 13, 2013 – from 9:00 a.m. to 4:00 p.m. at the Overbrook Environmental Education Center, 6134 Lancaster Avenue, Philadelphia, PA 19151

From *Vegetable, Small Fruit and Mushroom Production Upcoming Events*, Penn State Extension, <http://extension.psu.edu>.

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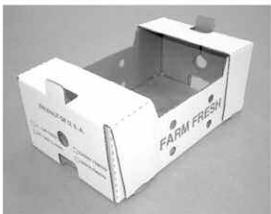
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## NEWS

## Raspberry and Cut Flower High Tunnel Twilight Set for June 19

High tunnels provide a great opportunity to extend the season, protect high value crops, improve quality, and reduce weed and pest pressure. As a follow up to our High Tunnel School these twilight meetings will give you a chance to talk with growers and see good practices in action. At each twilight the grower will discuss their experiences with high tunnels and a visiting speaker will share knowledge on a special topic.

The twilight meeting will be held on June 19, 2013, from 5:00 to 7:30 p.m. at Pheasant Hill Farm located at 3502 Main



*Melanie Devault in her high tunnel. Photo courtesy Rodale Institute.*

Rd. E. in Emmaus. Pheasant Hill Farm is operated by George and Melanie Devault, Pheasant Hill Farm

The meeting is co-sponsored by the Women in Ag Network and PVGA.

George and Melanie Devault have run Pheasant Hill Farm in Emmaus since 1984.

High tunnel producers since 1990 they grow vegetables, herbs, cut flowers and berries in their tunnels. Participants will hear from George and Melanie on growing cut flowers and berries in tunnels and Kathy Demchak from Penn State will describe management for spotted wing drosophila a new invasive vinegar fly pest of berries.

To register call 610-746-1970 with your contact information. There is no fee to attend. Walk-ins welcome. One category pesticide update training credit will be offered. For information contact Tianna DuPont at [tdupont@psu.edu](mailto:tdupont@psu.edu) or 610-746-1970.

From **Vegetable, Small Fruit and Mushroom Production Upcoming Events**, Penn State Extension, <http://extension.psu.edu>.

## USDA Announces Webinar Series for the Fruit and Vegetable Industry

The USDA Agricultural Marketing Service's Fruit and Vegetable Program is hosting a series of free, interactive webinars on the various programs and services available to producers. At each webinar, participants will hear a presentation from a USDA expert on a specific topic and take part in an interactive question and answer session.

The first webinar in the series, "How to Sell Fruits and Vegetables to the USDA," will take place on June 27 at 2:00 pm ET. The hour-long session will provide background and information on how to sell produce to USDA. Each year, USDA purchases over \$530 million and 1.1 billion pounds of frozen, processed, and fresh fruits and vegetables to be used in school feeding programs and food banks.

These informative webinars are designed for fruit and vegetable growers, packers, shippers, processors, wholesalers and retailers of all sizes. All of the webinars are free and available to all. Registration is, however, required and space is limited. Register today at <http://bit.ly/145Arm2> to take the first step to gaining a competitive edge and learning how to work together with USDA to meet your unique business needs.

For more information about the webinar series or USDA's Agricultural Marketing Service, please contact Christopher Purdy at 202-720-3209 at [christopher.purdy@ams.usda.gov](mailto:christopher.purdy@ams.usda.gov).

From **Inside United Fresh**, United Fresh Produce Association, May 2, 2013.

## Penn State Online Beekeeping Course Receives International Award

A Web-based Penn State Extension course designed to help beginning and experienced beekeepers gain the knowledge they need to be successful has been recognized for online excellence.

Beekeeping 101 was named an official honoree in the 2013 Webby Awards. The course was one of 11 honorees in the Education category. This year's awards program received 11,000 entries from all 50 states and more than 60 countries worldwide.

An interactive approach to online learning that can be taken anywhere and anytime, the course was created by Penn State Public Media in collaboration with Tom Butzler, Penn State Extension horticulture educator, and Maryann Frazier, senior extension associate in entomology.

"The Webby Awards are the leading international awards program honoring excellence on the Internet," said project co-manager Diane Espy, senior producer/director with Penn State Public Media. "As the first Webby Award given to a project at the University, this is a prestigious recognition for Penn State."

Webby winners are chosen by the International Academy of Digital Arts and Sciences, a global organization of industry experts and technology innovators. Website entries are judged on content, structure and navigation, visual design, functionality, interactivity and overall experience.

With colony collapse disorder decimating honeybee populations in recent years, educating beekeepers has taken on added significance. About one-third of the human diet is dependent on insect pollination. The U.S. Department of Agriculture estimates that honeybees and other pollinators play a crucial role in the production of about \$30 billion worth of crops, including apples, berries, cantaloupes, cucumbers and almonds.

"The Beekeeping 101 online format enhances Penn State Extension's ability to broaden access to the course internationally," said Dennis Calvin, director of Penn State Extension and associate dean in the College of Agricultural Sciences. "Whether you're in Pennsylvania or another country, you can participate in a global learning community of beekeepers helping to strengthen the honeybee population."

The 10-module course combines video, multimedia and interactive activities that participants can complete at their own pace. The modules provide basic knowledge needed to keep and manage a healthy beehive and to produce honey and beeswax. Modules cover bee biology, bee behavior, hive management, diseases and pests, swarming, and other topics.

Butzler noted that the course could be used by school teachers for professional development and by gardeners who want to start beekeeping as a natural extension of their hobby.

"Whether someone is new to beekeeping or wants to add to their beekeeping knowledge, Beekeeping 101 is a fun and interactive way to learn," he said.

More information about the Beekeeping 101 course is available at <http://beekeeping101.psu.edu>.

From **Penn State News**, Penn State Univ. <http://news.psu.edu>, May 9, 2013.

## Farm Business Opportunity

A Penn State extension educator was recently contacted by a couple interested in a joint venture with a young/beginning farming. See their description below and please direct any questions to the owner: johnfitzcharles@gmail.com

"My partner and I recently purchased a lovely 12.5 acre farm in Sciota, Pennsylvania in the southern Pocono Region. We are very interested in actively farming the land, but have almost no agricultural experience to speak of. We are both health care professionals working full-time in our fields. We are interested in teaming up with a young farmer interested in starting their own business. We have the land available, we have some start-up capital, but lack the education and training for such a venture, as well as the time that would be required for such an enterprise.

"Our home sits toward the back of the 12.5 acre parcel. There is a beautiful old barn built in 1852 which is in need of some clean out and structural renovation. This a something we definitely want to preserve but our schedule and budget for this project will depend on how and when we decide to use the structure. There is also a 40 foot long chicken coop which is set up on blocks and is in excellent condition. This building, because it is an actual building, could have myriad uses from raising chickens or rabbits, to being converted to a grow house (there are many windows along the front of the building with southern exposure and lots of natural sunlight), etc. Then there is a massive tennis court whose surface has aged and cracked a bit, but which is surrounded by a 12 ft cyclone fence on all sides and which gets wonderful light exposure. This area, because of its protective fence, could be converted to a very

large garden area, nursery, greenhouse, or could be put to various other practical uses (neither of us is greatly interested in tennis). Finally there are approximately 5.5 acres of open land which will be ideal for pasture or agriculture. There is a lovely stream which bisects the property, and numerous springs on the land as well, so there is an ample supply of free fresh water.

"As I stated previously, both of us wish to convert this property to an active working farm. However, because of our lack of education/experience and also because we both work full time in our respective professions, it is not possible for us to dedicate ourselves 100% to this endeavor. Our hope is to team up with a person who is interested in farming and would like to use our land and facilities to create and run their business. We do have some capital to invest, and we do have some time and energy to invest as well, but perhaps not as much as is needed to accomplish this goal on our own. We are hoping we can create a mutually beneficial and satisfactory situation with the right individual to bring out all the potential of our lovely small farm."



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## NEWS

## Young Grower Alliance Offers Support for a New Generation of Specialty Crop Producers

A new generation of specialty crop growers is building coalitions to develop innovative approaches for meeting future growing and marketing challenges. Participate as much or as little as you want, but get to know other young producers, university extension workers and industry members in your field.



It's been all too common that an older generation farmer ponders: "Who will take over after I retire?" and is left without an answer. Yet there is a significant younger generation asking: "How can I get started?" Enter educational programs, like the Young Grower Alliance (YGA) who attempt to bridge the gap between the generations and support young people in their efforts as they transition into a career as a specialty crop grower.

The Young Grower Alliance is a local example of a group that offers education, support and networking to young people interested in or just beginning their horticultural career. Many members of YGA have returned to family farms to grow tree fruit, such as apples, peaches and cherries or they focus their efforts on raising vegetables from asparagus to zucchini and everything in between. Some do not hail from a farming family and are striking out on their own. No matter their background or crop specialty, they all have a desire to learn, meet peers who have chosen a similar farming lifestyle, take on leadership opportunities in their industry and give back through service.

In 2005, Penn State Extension with support from the State Horticultural Association of Pennsylvania (SHAP) sought to create a program intended to develop the leadership skills of young growers and provide a forum for networking. The Young Grower Alliance (YGA), a coalition of young men and women, in or interested in a horticultural career, was formed, with the mission of encouraging, developing, supporting and equipping the next generation of specialty crop producers. Currently there are more than 200 members, from Pennsylvania and surrounding states.

What does YGA do? The group's activities can be summarized into 6 main goals with several related initiatives:

- Industry Partnerships
  - Scholarships (in cooperation with SHAP)
- Workshops and Speaking Engagements
  - Transition Planning
- Service
- Leadership Opportunities
- Fundraising
- Trips
  - Sharing Diversification and Marketing Ideas
  - Exploring Innovations

Touring specialty crop operations is popular with YGA members. Annually, members plan visits to local, national even international grower operations. A tour to California and a tour of the burgeoning fruit industry in South Africa are in the planning stages. This spring, the group visited Heller Orchards and Schwalm Farms in northeastern Pennsylvania. This will be followed by an early summer and then late fall tour, both with destinations still to be confirmed. Tours such as these are of great value to members as they share experiences and knowledge with peers in the industry.

Individuals are also actively involved in initiatives related to transition planning, sharing diversification and marketing ideas, exploring innovations, service and more. YGA members take advantage of many leadership opportunities such as the U.S. Apple Association's Young Leader Program where young growers meet with U.S. representatives and inform them of challenges facing the industry. Other leadership roles held by YGA members include: 4 at the county, 10 at the state, 7 at the national, and 1 at the international level. With the encouragement of mentors and peers, YGA has become a system of support for growers as they transition into their new roles.

Not only do Young Grower Alliance members encourage youth to consider a horticultural career, each year the coalition chooses a young person entering the field as a recipient of the State Horticultural Association of Pennsylvania Scholarship, created in the memory of Scott Brown who served as a model for young growers returning to the family farm. Members also plan fundraising events such as apple sales at the Pennsylvania Farm Show to raise money for industry research and by making their own value added products to sell at market.

The YGA partners with Project Gettysburg-León (PGL) for an international service project in an underserved community in Nicaragua, near Gettysburg's sister city of León. The village of Talolinga is located in a rural mountain area. Its residents depend on agriculture for their livelihood. This project's aim is to support the residents' desire to transition to more sustainable practices. This is being accomplished by furthering the training and university studies of a young man who is in turn is teaching his community members strategies for implementing new techniques and crops. YGA hopes to extend this model to surrounding communities and build a network of local extension agents.

The Young Grower Alliance has become a valued system of support for young growers as they transition into new roles in their family businesses or strike out on their own. If you would like more information on how to participate, please contact Catherine Lara, Young Grower Alliance coordinator & Specialty Crop Program Assistant, at [cyL1@psu.edu](mailto:cyL1@psu.edu) or 717-334-6271, ext. 315.

*Ms. Lara is with Penn State Extension in Adams County. From **Tree Fruit Production News** blog, Penn State Extension, March 25, 2013.*

MARKETING

**Retail Farm Market Employee Professional Development Is Now On-line**

Have you ever looked for training materials to build the knowledge and confidence of your farm market personnel? Penn State Extension now offers on-line training for farm professionals that handle, process, or merchandise fresh market produce. This educational material is designed for people that market through a CSA, farmers' markets stand, and on-farm markets. This on-line education is part of a full day workshop that provides employees with knowledge and skills for responding to preserving product quality and serving customer needs. If you missed this full day workshop, here is a chance to enhance your direct-to-consumer farm marketing skills.

Topics include:

- Produce Handling and Quality
- Produce Merchandising
- Customer Service
- Sanitation

The materials are designed to address the science of produce and the art of retail marketing. From the workshops delivered this spring we find this material is appropriate for new

**Hold the Date!**

The 17th *Annual Are You Crazy?* retail farm market and agri-tourism bus tour will be September 10 & 11, 2013. The tour will visit 12 premiere direct-to-consumer farm marketers in northern New Jersey and Connecticut on this two day adventure. It is an invaluable opportunity for market operators to learn what other successful markets are doing while comparing notes with other marketers on the tour. Watch for details in upcoming newsletters.

employee training and as a refresher for existing employees. Five brief on-line videos are available at no fee. You can use them as your, and your employees, schedule permits. To take advantage of this unique training opportunity go to <http://www.youtube.com/psufoodandfarmbiz>

This program provides a basic understanding of produce science, which will help employees understand and be responsive to consumer needs. Additionally, program participants will be able to provide the highest level of friendly, helpful and skilled service. The course is valuable for anyone who handles, processes, or merchandises fresh market produce. For additional information contact John Berry, [johnberry@psu.edu](mailto:johnberry@psu.edu)

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GENERAL

# Ozone May Be an Option for Wash Water Treatment

Dale Rothenberger

The food industry is currently in need of innovative processing technologies to meet fresher and safer consumer demands. Recent outbreaks of e-coli, salmonella and other food contaminants, coupled with coming changes in FDA regulations mean that added changes are coming in the way we process foods in America. Contaminated food sickens 48 million Americans, resulting in more than 3,000 deaths and more than 100,000 hospitalizations each year. Bacteria and viruses are the most common cause of food poisoning. The symptoms and severity of food poisoning vary, depending on which bacteria or virus has contaminated the food.

Fruits and vegetables carry bacteria and mold directly from the growing field, which reduces shelf life and can cause serious health issues. While nearly all food processing facilities rinse produce with clean water, rinsing alone does not adequately sanitize against mold and bacteria.

In July, the FDA will announce further details of the standards for conducting a hazard analysis, implementing preventive controls, and documenting implementation of preventive controls. Under these new regulations, accountability for exposing contaminated foods is "anyone engaged in the business of selling or otherwise distributing" the defective food product.

Hazard Analysis & Critical Control Points (HACCP) is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product. HACCP has been in effect for larger producers for some time, but will most likely apply to any grower that is involved in distribution or sale.

With these coming changes, efforts are underway to find other suitable treatment processes. Post harvest treatment of vegetables continues to be a problem in control of contaminants. Ozone has a proven track record over many years for disease control and storage. With the new regulations, there is elevated interest in evaluating ozone and its effectiveness.

Ozone is a potent antimicrobial agent, capable of effectively eliminating viruses, bacteria, and parasites, including those that cause food spoilage and human diseases. There are many published tests demonstrating that ozone slowed the respiration rates of vegetables, which can result in extended shelf-life. Both chlorine and ozone did not impact the respiration rate of strawberries, demonstrating that results are produce-specific. Ozone was more effective than chlorine in extending the firmness of strawberries and lettuce.

Ozone is simple to administer, either as a gaseous or aqueous application. Protocols exist as to the amount of ozone that is required to properly sanitize crops. The simple calculation is ozone concentration against length of time of exposure (CT Value). Ozone is inexpensive to generate, easy to administer, and cost effective against chemical based sanitation with hot water. At the same time, it can reduce water usage, chemicals, energy, labor and time by consolidating or eliminating sanitation steps to reduce downtime.

Dale Rothenberger has over 20 years of experience in business transformation and program process management. He is available for consultation and can be reached at d.rothenberger@zeemedrdg.com or at (610)926-1401.

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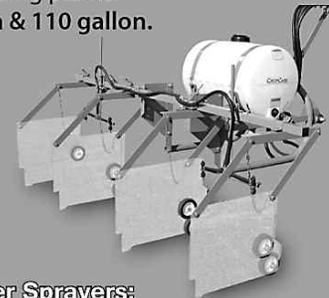
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## GENERAL

## Produce Safety Rule Questions Answered

Wesley Kline and Meredith Melendez

The Produce Safety Alliance has coordinated a series of conference calls to answer questions on the Food and Drug Administration's (FDA) Proposed Produce Food Safety Rule. Following is a summary of the session on equipment, tools, buildings and sanitation practices that will be affected by the impending rule.

**1. Are cats permitted in packing houses?** They serve as effective rodent control. There is no rule that cats cannot be used for rodent control but you must consider the potential for contamination of product or product contact surfaces by the cat.

**2. Where does OSHA come into play with the Food Safety Modernization Act?** The FDA used 29CFR (OSHA standards) as guidance for toilets and handwashing stations. However, the rule is not exactly the same as OSHA.

**3. Is a household toilet facility OK if it is in compliance with OSHA regulations?** Yes, that is OK, but it should be supplied with soap, single use paper towels, toilet paper and a trash can. Cloth towels should not be used.

**4. Are cement floors required in a packing house?** No

**5. Should hand washing stations be located inside of a portable toilet?** Yes they should but it is not mandated. FDA would like comments on whether the handwashing station should be located outside the portable toilet.

**6. What guidance is given regarding rodents?** The FDA wanted to take a holistic approach with rodent control, so that growers can take care of problems as they occur. No specifics are given as to the methods of rodent control so that it can work with existing systems already in place.

**7. Are there specifics on how to clean equipment in a packing shed?** The goal is to prevent contamination of product and product contact surfaces. Guidance will be coming on this topic after the final rule is written.

**8. Are instruments required for testing to determine how clean equipment is maintained?** No testing is required.

**9. Do wooden tables need to be sanitized?** Wooden bins, tables etc. need to be sanitary not sanitized.

**10. How about wood surfaces where produce is cut or packed?** Product contact surfaces must be sanitized – how an operation gets to that point is up to them.

**11. When picking buckets are emptied, cleaned and returned to the field how should they be transported (upside down on the wagon, right side up, stacked)?** The grower must consider the likelihood of contamination and reduce that likelihood.

**12. What is recommended for the disposal of grey water from a hand washing station?** The rule states that it should be disposed of in a way that prevents it from becoming a potential contaminant.

**13. What pest control methods are required for packing sheds that are not fully enclosed or enclosed at all?** Measures should be taken to prevent pests from becoming established. These areas should be monitored and if pests are noticed they should be removed and prevented from posing additional problems.

**14. Can harvest bins be stored in the field overnight?** Yes, measures should be

taken to prevent contamination such as covering the bins. Bins should be inspected before their use and not used if contamination is evident.

**15. How stringent is the rule regarding seams of equipment or tools?** Seams should be smoothly bonded or maintained so that they do not pose a contamination risk. In older equipment retrofits may be required.

**16. Alternative methods are discussed repeatedly in the rule, and during the last Q&A it was suggested that alternative methods would be applied to groups. Can alternative methods be applied to individual growers?** Alternative methods are appropriate for groups as well as individuals provided they are science based.

**17. Vegetable washers often have brushes or sponges that are tough to take apart and clean, what should be considered in this situation?** The FDA would like comments on specific washing practices and equipment. Close attention should be paid to the equipment used for washing produce to determine the potential for it to contaminate produce.

*Dr. Kline and Ms. Melendez are with Rutgers Cooperative Extension. From the Plant and Pest Advisory, Rutgers Cooperative Extension, <http://plant-pest-advisory.rutgers.edu>; May 17 and 19, 2013.*



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## VEGETABLE PRODUCTION

## Transplant Losses and Replant Options

Gordon Johnson

Many vegetable growers in the region have lost significant number of transplants to cold conditions after planting, seed and root maggots tunneling into stems, seedling diseases such as Pythium, wind damage, and wildlife damage over the last 3 weeks. Weather conditions have been suboptimal for warm season vegetables many days this month, limiting root growth, and placing plants under additional stress. There was also a late frost earlier in the week in some areas that injured or killed some transplants.

Growers will need to decide how to deal with plant losses in the field. Replanting with transplants is the best option. However, the base cause of the loss must be known to avoid losses again in the replanting. If losses were strictly due to cold, then the replanting can go ahead without further consideration. If the losses were due to seedling disease affecting roots or stems then appropriate treatment of the area with registered fungicides should be considered before replanting. The same holds true if losses were due to maggot feeding and seed/stem/root maggot flies are still active. Appropriate insecticides should be considered prior to replanting.

If growers do not have spare transplants, they can try to obtain transplants from other growers or commercial transplant operations. Most transplant growers do produce some overage when they grow transplants and limited amounts may be available. The main issue when this occurs is that you will not always have access to the same varieties that you initially decided on for the field affected with the losses. You need to decide if the substitute varieties will suit from a marketing standpoint. Planting varieties that you will have a hard time selling or that do not fit your marketing program will serve no purpose.

Another issue is that many of our transplants such as watermelons come from southern growers. Full trailer loads of plants are shipped north to our region (most economical). To get partial shipments for replacements (if available), growers will still be paying full shipping fees. Most large transplant growers do not grow on speculation – they grow to order. Any available plants will be from overages or orders that were not shipped for some reason. These plants may be of lower quality because they have been held in small trays for longer than desired. Growers seeking replacement plants should contact their plant suppliers, seedsmen, or brokers for assistance in finding plants.

One option for large seeded crops is to direct seed in the holes where transplants died (again making sure that the underlying cause of death is known and dealt with). This works for crops such as cucumbers, squash, muskmelons and watermelons. In watermelons, if losses are scattered, planting holes with pollinizer seed is an option. If seeded watermelons are used as the pollinizer (such as Stargazer, Mickylee, Sangria, etc.) they will grow very quickly from seed and you may only see 5-14 days difference in flowering compared to transplants. If the losses are light, then taping the holes (to prevent weeds from growing) and just letting the plants vine into the missing area

is an option. Watermelons have some ability to compensate for stand losses by putting on additional vines and fruits. If soil temperatures are in the 80s then it is also possible to plant seedless watermelon seed directly in the holes with missing plants (plant 2 per hole) using a shorter season variety. While a full yield will not be obtained, there is potential for some yield recovery.

If losses are heavy, then destroying existing plants and growing new transplants for a late planting in the same area is another option. It can take as little as 3-4 weeks this time of year to grow out some transplants so they will be available for a June planting.

*Dr. Johnson is with the University of Delaware. From the Weekly Crop Update, Univ. of Delaware, Vol. 21, Issue 8, May 17, 2013.*

## Perennial Weed Management Discussed in Tomato Webcast

Perennial weed infestations in tomato crops can have many negative effects on crops, like lower yields, added costs from losses due to insects and diseases, and reduced-quality products.

The latest Focus on Tomato webcast, titled "Managing Perennial Weeds in Tomatoes," (at <http://www.plantmanagementnetwork.org/edcenter/seminars/Tomato/ManagingPerennialWeeds/>) by Dr. Steve Weller at Purdue University summarizes different perennial weed types, shows examples of problem perennial weeds, and discusses techniques available for managing these weeds.

This talk particularly covers...

- Site preparation
- Elimination of perennial weeds before tomato crop planting
- Methods to manage perennial weeds in the tomato crop
- Perennial weeds management in rotation crops, especially agronomic crops

This presentation is open access through July 31, 2013. Users can view other recent webcasts in the Focus on Tomato resource at [www.plantmanagementnetwork.org/fot](http://www.plantmanagementnetwork.org/fot).

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## When to Switch Plastic Mulch Colors

Gordon Johnson

The past several years have had periods of extreme heat that have caused fruit quality issues in tomatoes and peppers. Research has shown that high bed temperatures and the effects on root function have contributed to these problems.

One solution is to reduce bed temperatures by using white or reflective mulches. These can lower bed temperature by up to 20°F. This in turn can increase root function and reduce fruit disorders such as blossom end rot, white tissue, blotchy ripening and yellow shoulders.

In the past, a rule of thumb has been to switch to white or reflective mulch in the middle of June when days are longer and air temperatures are higher for a longer period of time.

Is there an advantage to switching earlier? Up to the middle of May, black plastic (or other soil heating colors) should be the preferred mulch to get plants off to a good start when soil temperatures can be variable and bed heating improves crop performance. The second half of May can see some very hot weather as can the beginning of June but this varies from season to season. If we continue to see warming trends and long range forecasts are for warmer than normal temperatures, laying white or reflective plastic for late May and early June may be advised for sensitive crops such as tomatoes and peppers.

*Dr. Johnson is with the University of Delaware. From the Weekly Crop Update, Univ. of Delaware, Vol. 21, Issue 7, May 10, 2013.*

## Supplemental Label for Fontelis Fungicide

Kate Everts

The fungicide Fontelis has just received a supplemental label for several new uses, including for field, fruit and vegetable crops. A few of the new vegetable uses on the label are the following:

- In-furrow or band applications for seedling diseases of tomatoes and snap bean
- Foliar applications for garlic rust, purple blotch and white rot on bulb vegetables such as onion
- Foliar applications for leaf spots and powdery mildew on brassica leafy vegetables.
- Foliar applications for leaf spots and blights of fruiting vegetables (tomato, pepper, eggplant, etc.)
- Directed spray for basal stem rot (*Sclerotinia rolfsii*) of fruiting vegetables
- Foliar applications of Septoria and powdery mildew on leafy vegetables
- Foliar applications for leaf spots and anthracnose on edible podded and succulent shelled legumes

See label for specific guidelines and additional uses.

*Dr. Everts is with the University of Delaware. From the Weekly Crop Update, Univ. of Delaware, Vol. 21, Issue 7, May 10, 2013*

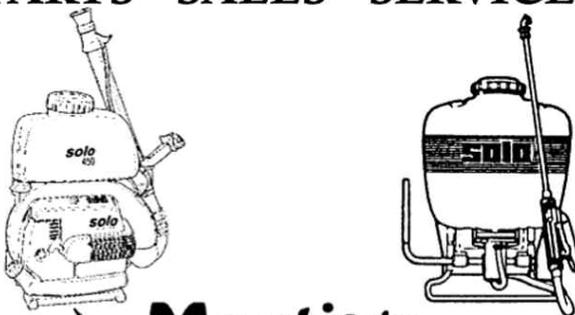
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## VEGETABLE PRODUCTION

## Water Management Plan for Your High Tunnel

*Rose Ogutu*

A uniformly moist soil is ideal for most horticultural crop production, yet high tunnels receive no external rainfall. It is important to maintain adequate soil water content during pollination and fruit development right up to harvest. Most irrigated vegetable crops develop shallow roots with no more than 10 to 12 inches of rooting depth (onions develop about 6 inches). This depth is achieved within 30 to 40 days from planting. Extreme fluctuations of wet and dry conditions cause yield loss and reduce quality of produce. Overwatering produces much shallower than anticipated rooting depth, and encourages N-leaching from the root zone and can result into root rots and slow growth. The high humidity caused by the free water and high temperatures also enhance disease incidence. Incidences of blossom-end-rot and cracking of tomatoes can be a result of overwatering. It is important to always refill the soil profile at every irrigation event. Frequent light watering causes shallow root systems.

Drip irrigation is the most effective watering system in plasticulture production as it helps maintain uniform soil moisture.

A full season crop like tomatoes or cucumbers may require 14 to 20 inches of soil water to meet the crop's daily evapotranspiration (ET) throughout the growing season (1 inch of soil water from a 100-foot row with an average canopy of 18 inches = 94 gallons or for 24 inches = 125 gallons). Soil water can be extracted by a plant and evaporated at a rate of 0.05 to over 0.30 inches per day, depending on the stage of plant growth, tunnel temperature and amount of sunshine (equivalent to approximately 5 to 50 gallons per day per 100 ft of plant row dependent on plant width).

To adequately plan your irrigation system:

- Evaluate the crops water needs, water use at peak periods, fertility needs, soil type, plant row layout and water supply.
- Ensure adequate drainage of your soil. If possible, keep organic matter at 5 to 6 percent.
- Make sure you have an adequate water supply. A typical drip system for a 30 x 96 ft high tunnel may need a water supply pumping rate of 2.5 to 4 gallons/minute of the selected drip tubing. For multiple tunnel units, a larger well and dedicated pump may be required. Sources from lake or stream may require more filtration to prevent the drip irrigation system from plugging. The main line from the water source should be sized to provide adequate pressure and flow rate. For a single high tunnel unit, a 1/2 to 1 inch pipe should be adequate to deliver 3 to 4 gpm at an operating pressure within 30 to 40 psi so that one can easily operate a fertigation system along with the drip system.
- Choose the right drip tubing to ensure uniform delivery. Drip tubing comes in various wall thicknesses (4 mils to over 15 mils). Thinner tubing types (4 to 10 mils) are commonly used in mulch row beds found in high tunnel systems. Emitter spacing of 8 to 12 inches deliver uniform and continuous wetting patterns along the plant row to give 0.2 to 0.6 gallons/min per 100 feet tubing. Tubing emitters should always be placed facing upwards and placed in shallow groove. For single row plants (e.g. tomatoes and cucumbers), place drip tape in the center or 4 to 5 inches from the center of the bed. For double row crops (e.g. pepper, egg plants, strawberries), a single irrigation tube in the center, slightly buried should be adequate.

- When placing different plants on the same row consider their watering needs.
- Use soil moisture sensors and establish a schedule for reading them. Work the tensiometers at different depths based on soil type. A soil feel damp/moist method can help, and for a silt loam soil can be fairly accurate.
- Examine the root development of several plants 40 to 50 days after planting to observe how they interact with the soil profile and the irrigation zone.

For more information on water management in high tunnels refer to: <http://www.extension.umn.edu/distribution/horticulture/components/m1218-7.pdf>

*Ms. Ogutu is with Delaware State University. From the Weekly Crop Update, Univ. of Delaware, Vol. 21, Issue 6, May 3, 2013.*

## Protecting Against Pythium and Phytophthora Blight

*Andrew Wyenandt*

With the wet weather we've experienced in New Jersey over the weekend and the warm temperatures to follow this coming week Phytophthora blight (*P. capsici*) and Pythium are likely to start showing up in pepper, tomato, and cucurbit fields.

Along with mefenoxam (Ridomil Gold SL, FRAC code 4), and MetaStar (metalaxyl, 4), there are a number of new options for controlling early-season Phytophthora and Pythium. For pre-transplant applications, there is a Ranman (cyazofamid, 21) drench one week before transplanting for Pythium in tomatoes as well as Previcur Flex (propamocarb HCL, 28) for the suppression of Pythium and Phytophthora in tomatoes and peppers. Additionally, there are a number of biologicals such as Trichoderma, Streptomyces, and Bacillus products which can also be used in the greenhouse to help suppress soil-borne pathogens.

At transplanting applications now include Ranman (cyazofamid, 21) in the transplant water or through drip irrigation for Pythium control. There is a section 2ee for the use of Previcur Flex (propamocarb HCL, 28) + Admire Pro (imidacloprid) in transplanting water for Pythium control in lettuce, cucurbits, peppers and tomatoes (see section 2ee for details). Presidio (fluopicolide, 43) now has an label for drip application for Phytophthora control when conditions are favorable for disease development. Additionally, phosphite fungicides, Pro-Phyt, Rampart, and K-Phite (FRAC code 33) can also be applied through drip irrigation after transplanting to help suppress Pythium and Phytophthora blight.

Unlike in past, there are a number of good options for early season control of Pythium and Phytophthora blight. For further details on use and crop labeled please refer to the specific fungicide label. Remember the label is the law.

*Dr. Wyenandt, is with Rutgers University. From the Plant and Pest Advisory, Rutgers Cooperative Extension, <http://plant-pest-advisory.rutgers.edu>; May 19, 2013.*

## VEGETABLE PRODUCTION

### MET52 EC, A New Mycoinsecticide for Greenhouse and Vegetable Growers

Thomas Ford

An entomopathogenic fungus formulated for managing a variety of insects in agricultural systems organically.

MET52 EC, a new mycoinsecticide from Novozymes contains the naturally occurring fungi *Metarhizium anisopliae* var. *anisopliae* strain F52. This entomopathogenic fungus has been looked at by entomologists for years as a safe organic control for a variety of insects in agricultural systems. The first reported use of this naturally occurring soil inhabiting fungus dates back to 1879 when Elie Metchnikoff utilized it in experiments to control wheat grain beetle. *Metarhizium anisopliae* categorized as a green muscardine fungus is known to infect over 200 species of insects. At this time MET52 EC is labeled in Pennsylvania for controlling thrip pupae, whiteflies, spider mites, and black vine weevils on a variety of horticultural crops.

MET52 EC contains fungal spores of *Metarhizium anisopliae* var. *anisopliae* strain F52. When spores come in contact with the insect they germinate and produce hyphae that typically enter the insect through the spiracles and pores of the sensory organs of the insect. Once inside the insect, the hyphae proliferate to the point that the insides of the insect are literally consumed by the fungus. *Metarhizium anisopliae* var. *anisopliae* strain F52 can infect the larvae and adults of many insects, but adult beetles tend to resist infection because of their strong exoskeletons. As a rule, insects that are exposed to *Metarhizium anisopliae* var. *anisopliae* strain F52 die within 3 to 7 days.

*Metarhizium anisopliae* is often referred by research entomologists as the "green" fungus". Insects that are infected by this naturally occurring organism take on a greenish hue from

the mats of green colored hyphae that cover the surface of the infected pest. At this time, there are no known reports of resistance to this naturally occurring mycoinsecticide.

MET52 EC is suspended in emulsifiable oil and can be used like most conventional insecticides as a drench or foliar spray. Submitted studies show that *Metarhizium anisopliae* var. *anisopliae* strain F52 is not harmful to earthworms or beneficial insects such as lady beetles, green lacewings, parasitic wasps, honey bee larvae, and honey bee adults. *Metarhizium anisopliae* var. *anisopliae* strain F52, (MET52 EC) is also labeled for tick control in residential lawns. MET52 EC's toxicological profile makes it an ideal material to use for black legged tick control in lawn areas where children will be playing.

*Mr. Ford is with Penn State Extension in Blair County. From the **Vegetable, Small Fruit and Mushroom Production News** blog, Penn State Extension, May 1, 2013.*



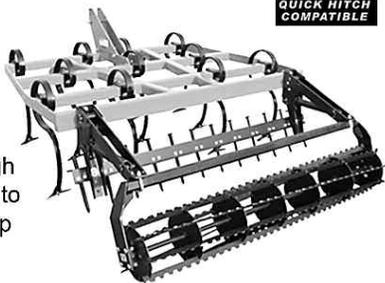
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## VEGETABLE PRODUCTION

## Spotlight on Common Groundsel

(*Senecio vulgaris*)

William Curran and Dwight Lingenfelter

Common groundsel (*Senecio vulgaris*) is a winter annual weed that can be found year-round, is toxic to livestock and is tough to control with certain herbicides.

Common groundsel seems to be a more abundant weed in our area over the last few years. This species is a winter annual that is generally five to ten inches in height at maturity with



Common groundsel beginning to flower. Image compliments of PSU Turf website.

lobed leaves, yellow petals and a white puff ball seedhead similar to some other members of the Asteraceae family such as dandelion. It tends to be most prolific during the spring of the year (now), but it can be found year-round. The plant generally matures throughout spring and early summer and usually dies in the heat of the summer. This is a weed that seems to flower and set seed during much of the year with flowers developing within about six weeks after seedling emergence. I noticed

plants flowering even back in February, particularly when growing in weather protected areas (e.g. next to buildings). Common groundsel generally produces about 2,000 seeds per plant depending on growing conditions. The seeds are easily spread by wind and unlike most plants; there can be more than one generation per year allowing populations to build fairly quickly. Several species of *Senecio* are known to be toxic to livestock including common groundsel, however livestock losses are uncommon, but most poisonings are due to ingestion of contaminated hay or hay cubes over a period of time.

Obviously like all annual weeds, groundsel is best controlled by eliminating the plant before it flowers and sets seed. Flowering plants that are pulled and not removed from the area can still set seed. The good news is that the seeds are not very long lived, so good management can quickly reduce the seed-bank. In most situations, spring tillage would effectively control this weed, but at the same time, this does not appear to be a weed of continuous no-till. Previous observations suggest that the wind-blown seed do not establish well in mulch or heavy residue. This was one of the first weeds to evolve resistance to the triazine herbicides back in the early 1970's in ornamentals. The effectiveness of some herbicides remains a bit of a question. Certainly triazine resistance is possible in our area, the phenoxy type herbicides (e.g. 2,4-D) are not very effective, although dicamba is considered effective and the effectiveness of glyphosate is still a question.

Dr. Curran and Mr. Lingenfelter are with the Department of Plant Science at Penn State Univ. From **Field Crop News** blog, Penn State Extension, April 23, 2013.

## Canada Thistle Control in Asparagus with Clopyralid

Scott Guiser

May is a good month for treating perennial colonies of Canada thistle using clopyralid.

The post-emergence herbicide Spur (a.i. clopyralid; Albaugh, Inc. Ankeny, IA) is labeled for Canada thistle control in asparagus with a 48 hour to harvest restriction. This is good news for asparagus growers. At one time the herbicide Stinger (a.i. clopyralid; Dow AgroSciences LLC) was labeled for asparagus but has since been removed. However, Spur and Stinger contain the same active ingredient therefore Spur is a viable alternative source for this active ingredient.

Canada thistle is a common and destructive weed in asparagus plantings. This deep rooted pest grows in perennial colonies that expand in size if not controlled. In addition, infestation from wind-blown seed adds to the problem. Often, only parts of fields are infested and spot



Canada thistle (*Cirsium arvense*). Photo credit: Mary Ellen (Mel) Harte, Bugwood.org.

treatments can be treated. Proper sprayer calibration is essential in order to deliver the correct rate of herbicide.

May is a good month for treating perennial colonies of Canada thistle with clopyralid. Label instructions suggest the full rate (2/3 pt/A) after the majority of the basal leaves have emerged through bud stage. Treat before flower stalks bolt. Delay cultivation two weeks after herbicide application. Alternatively, a split application could be made: first when leaves first emerge and again at the end of the cutting season, before fern growth. No more than 2/3 pt/A can be applied in one growing season.

Some crooking (twisting) of spears may occur and Spur should not be applied if this cannot be tolerated. Clear cutting of spears before application is advised to reduce potential injury.

For complete details and precautions see the Spur herbicide label. You will also find information on additional vegetable crops, strawberry and non-cropland labeling for Canada thistle control. The label is available at CDMS website.

Mr. Guiser is with Penn State Extension in Bucks County. From the **Vegetable, Small Fruit and Mushroom Production** News blog, Penn State Extension, May 9, 2013.

# Stem and Bloat Nematode of Onion and Garlic: A Re-Emerging Pest

Tianna DuPont

Do you grow garlic? This pest is something to be aware of. Like so many problems the best cure is prevention. This is one to keep off the farm! A summary of a presentation by Dr. George Abawi, Department of Plant Pathology, Cornell University.



Bloat nematode on garlic bulbs (photo G. Abawi, Cornell University)

Dr. George Abawi, Cornell University spoke recently at the Mid Atlantic Fruit and Vegetable Convention about stem and bloat nematode. This pest has been in the United States since the 1930s. Recently, in 2010, severe damage to garlic was reported in a New York garlic field. In response Cornell Extension and the Garlic Seed Foundation surveyed garlic fields across New York State and found that the problem is widespread, affecting 30% of fields in at least 17 counties. To date bloat nematode has been confirmed in Canada, Vermont, Massachusetts, Pennsylvania, and several other states.

## Symptoms and Damage

Severely infected garlic plants grown from infected seeds exhibit stunting, yellowing and collapse of leaves, and premature defoliation. The bulbs of infected plants initially show light discoloration, but later the entire bulb or individual cloves become dark brown in color, shrunken, soft, light in weight and eventually exhibit cracks and various decay symptoms due to the additional activities of numerous saprophytic soil organisms. However it can be very difficult to distinguish nematode infected bulbs from other problems. If you suspect that you have a problem Pennsylvania growers can send a sample to the Penn State Plant Disease clinic.

## Bloat nematode

Soil nematodes are microscopic round worms. Some of these round worms feed on plants, others feed on bacteria, fungi or other microscopic organisms. The bloat nematode, a plant feeder, lives some of its life cycle in the soil. For much of its life it lives and feeds inside leaves, stems, and bulbs of onion and garlic. Because it has a special stage of its life cycle where it can withstand very dry conditions it can survive for several years in infected plant tissue or soil. The nematode can only move small distances through the soil on its own. But it is easily spread through infected seeds and plant material, irrigation water or surface run off, contaminated equipment or other soil movement.

What can you do to prevent and manage bloat nematode?

Plant Only Nematode-Free Seeds. - Infected planting materials is the major source for introducing this important pathogen into new production areas, thus it is critical to use only clean seeds to prevent the establishment and damage of this nematode.

Hot Water Treatment of Planting Materials. - Considerable information is available in the literature on various hot water treatment protocols against the bloat nematode in garlic bulbs and plant materials of other crops. Depending on the soaking time, water temperature reported to reduce the population of this nematode have ranged from 38 – 49 C (100 - 120 F).

(continued on page 23)

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## BERRY PRODUCTION

## Resources for Commercial Highbush Blueberry Growers

Andrew Muza

Ever wonder where to find additional information on highbush blueberry production? This article provides a list and description of select available hardcopy and web-based resources.

So, you need information on some/all aspects of the production of highbush blueberries. An excellent place to start is with your local Extension Educator or your state's Small Fruit Specialist. However, since the growing season is underway, someone may not always be **immediately** available to answer your questions. Therefore, I have compiled a list of resources that you can explore to answer many questions that you may have, regardless if you are a prospective, novice, or veteran producer of highbush blueberries.

The first resource that any commercial blueberry grower should have is their state's current commercial small fruit guide. For Pennsylvania, New Jersey, Delaware, Maryland, Virginia and West Virginia growers, their guide is the Mid Atlantic Berry Guide for Commercial Growers 2013 – 2014 (<http://pubs.cas.psu.edu/freepubs/pdfs/AGRS097.pdf>). A hard copy of this guide can be purchased or downloaded for free. Chapters 1 - 5 provides general information for small fruit crops concerning: Preplant Considerations; Soil Management and Nutrition for Berry Crops; Pesticides, Pesticide Safety, and Chemical Fumigation; Weed Management; and Wildlife Damage Control. Chapter 7 is specific to highbush blueberry production. An extensive appendices (A-E) provides information on: Expanded Special Topics; Diagnostic Services; Nursery Sources of Berry Plants; Production Supplies and Services; and Additional Sources of Information. An excellent companion resource is the 200 page Highbush Blueberry Production Guide (<http://tinyurl.com/blueberryguide>) which can be purchased for \$42 plus \$6.00 shipping and handling. [This guide is also usually available at the publications table at the Mid-Atlantic Fruit and Vegetable Convention at a reduced price.] This guide covers all aspects of production from site preparation – marketing of fruit and includes 168 color photos.

Since Michigan is the number one state for highbush blueberry production it should be no surprise that a visit to the Michigan Blueberry Facts site at <http://blueberries.msu.edu/> provides an abundance of information on: Growing Blueberries; Nutrition; Pest Management; and Chemical/Other Injury. MSUE Blueberry News is available along with the option to view past blueberry articles. A number of publications can also be purchased at this site including: A Pocket Guide to IPM Scouting in Highbush Blueberries (<http://tinyurl.com/msublue1>); Managing the Nutrition of Highbush Blueberries (<http://tinyurl.com/msublue2>); and a DVD on Pruning Blueberries (<http://tinyurl.com/msublue3>) to name a few. In addition, from the Links page eXtension's All About Blueberries (<http://tinyurl.com/eXtensionblueberry>) can be accessed which contains videos, webinars, moodle courses and more. One of the webinars at this site is an Organic Blueberry Production Webinar at <http://tinyurl.com/blueberrywebinar>.

The Blueberry Bulletin (Rutgers – NJAES) (see <http://njaes.rutgers.edu/pubs/blueberrybulletin/>) provides weekly information during the growing season on cultural practices, and potential insects and diseases to consider. These bulletins often contain good pictures of insect pests and disease symptoms along with management options. Past bulletins back to 1998 are available.

The Cornell Fruit – Production- Blueberries site at <http://tinyurl.com/cornellbb> has a listing of publications from Cornell,

Penn State, Michigan State, etc., on: Site Selection; Cultivar Selection; Nutrient Management; Water Management; Plant Growth and Development; Pollination; Frost Protection; Pruning; and Postharvest Handling. In addition, Organic Production information can also be accessed from this site.

The Berry Webinar Archive at <http://tinyurl.com/cornellbb3> provides a listing of webinars on topics relevant to small fruit production including spotted wing drosophila. This site also provides a jump down menu to NEIPM Blueberry/Cranberry Mini Series at <http://tinyurl.com/cornellbb4> which consists of 4 webinars on: Weed Management; Blueberry Viruses; Overcoming Pollination Challenges; and Japanese Beetles.

The Berry Diagnostic Tool at <http://www.fruit.cornell.edu/berrytool/> assists in identifying potential causes of problems in berry crops. At this site select Blueberry then choose the closest descriptions to your problem to reach a final diagnosis.

Although the Northwest Berry & Grape Information Network – Blueberry Category site at <http://berrygrape.org/blueberry/> is most relevant for production in Oregon and Washington states it contains valuable information for all blueberry growers.

The last resource to be mentioned is an available DVD produced from the daylong Blueberry School that was conducted this spring in southeastern Pennsylvania. For purchasing information contact Steve Bogash, Penn State Extension – Franklin County 717-263-9226. Remember, you can always contact your local Extension Educator or your state's Small Fruit Specialist for information on blueberries, but now, you may not need to.

*Mr. Muza is with Penn State Extension in Erie County. From the **Vegetable, Small Fruit and Mushroom Production** News blog, Penn State Extension, May 1, 2013.*

## Gowan Malathion 8 Flowable Now Labelled for Blueberries in PA

Kathleen Demchak

A Special Local Needs ((Section 24(c)) label for was approved for use of Gowan Malathion 8 Flowable on blueberries for spotted wing drosophila control.

A Special Local Needs ((Section 24(c)) label for was approved for use of Gowan Malathion 8 Flowable on blueberries for spotted wing drosophila control. The 24(c) label allows Malathion 8F use at its old higher rate (up to 2.5 pints/acre) instead of the maximum 1.25 pints/acre that is currently allowed on the full label for other pests. The pre-harvest interval is also increased to 2 days if the higher rate is used (relative to 1 day at the lower rate).

Data from other universities had shown that malathion activity against spotted wing drosophila dropped off quickly if it was used at the new lower rates on the full label, even though initial activity was very good. Using the higher rate resulted in longer control. Only 2 applications at the higher rate may be used during a growing season; however, if materials in different chemical classes are being used to manage SWD resistance (and they should be), 2 applications of Malathion 8F should be sufficient. A maximum of 5 lb of active ingredient per acre from all sources can be used per year, and the minimum retreatment interval is 7 days. The label content is on-line at <http://www.cdms.net/LabelsMsds/LMDDefault.aspx?pd=596&t=>. This label expires on April 1, 2016.

*Ms. Demchak is with the Department of Plant Science at Penn State Univ., From the **Vegetable, Small Fruit and Mushroom Production** News blog, Penn State Extension, March 30, 2013.*

## GREENHOUSE PRODUCTION

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Penn State's annual flower trials are the single place to see over 1,100 of the newest cultivars that will be marketed the following year. Greenhouses and garden centers use the trials to make purchase decisions and hear from industry contacts on the latest issues.

This year's field day will be held on July 25, 2013 at the Penn State Southeast Agriculture Research and Extension Center in Manheim (Landisville). For further information contact Steve Bogash at 717-263-9226, Ext. 230 or smb13@psu.edu.

## VEGETABLE PRODUCTION

**Stem and Bloat...** (continued from page 21)

However, water temperature above 50 C (122 F) appears to injure garlic tissues. Also, dipping garlic bulbs in hot water alone without other additives (sodium hypochlorite, avermectin, formaldehyde, various fungicides, or other chemicals) were not as effective. It appears that the most used protocol is dipping for 20 minutes at 49 C (120 F). Hot water treatment should be considered only when clean bulb are not available, as even the best hot water treatment does not completely eliminate the nematode and may also increase other disease problems.

Avoid infested Sites or Treat the Soil with an Appropriate Control Product. - Nematode-free seeds should be planted in soil free of infestation with the bloat nematode. If there is any question, the soil of the target site should be sampled and analyzed for the presence of the bloat nematode. Garlic grown for seeds should be planted in nematode-free soil. In addition, a population of as low as 10 bloat nematodes/500 cc soil has been reported to cause damage in many crops. Pre-plant soil fumigation with registered nematicides will control this nematode as well as other plant-parasitic nematodes, where needed and if cost-effective. Mixed results have been reported in the literature with the use of non-fumigant-type nematicides in controlling the bloat nematode and only limited evaluations have been conducted to-date in New York.170

For more detailed information see Dr. George Abawi's report in the **Mid Atlantic Fruit and Vegetable Convention Proceedings 2013** at <http://extension.psu.edu/plants/vegetable-fruit/news/pdfs/bloat-nematode>.

For another great write up see a University of Maine publication at <http://extension.umaine.edu/publications/1205e/>

*Ms. DuPont is with Penn State Extension in Northampton County. From the Vegetable, Small Fruit and Mushroom Production News blog, Penn State Extension, May 1, 2013.*

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