



## Cornell University Berry Team

### *Berry Grower Volunteers Needed for Farm Business Summary Project*

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Are you confident your commercial berry business is maximizing your return on investment? Is it thriving, or merely surviving? Are berries an asset on your ledger or really a liability?

If you'd like help answering these questions, volunteer as a grower participant in a new project, "Building a Better Bottom Line for NYS Berry Growers," funded by New York Farm Viability Institute's Ag Innovation Center.

The project is led by Dr. Marvin Pritts, professor and chair of the Cornell University's Department of Horticulture. Other team members include horticultural marketing expert Dr. Bradley Rickard and two graduate students from the Cornell's Charles H. Dyson School of Applied Economics and Management and nine Cornell Cooperative Extension educators from around the state.

#### **About the project**

During Stage 1, the project team will enlist 24 commercial berry growers statewide to participate in berry farm business summaries. Participating farm operations need to have been in business the past three years, had sales in 2012, and preferably produce at least two berry crops.

Extension educators will work with growers to collect economic information for the summaries. In addition, they will collect crop production data to develop crop budgets. Crops in the initial study will include strawberries, blueberries and raspberries.

Information collected will remain anonymous. The budgets generated will not be attributed to specific farms. Instead, they will provide benchmarks (statewide averages calculated from collected data) that will help participants evaluate their business performance. In return for their participation, growers will receive a one-on-one review of their berry farm business summary with their educator as well as crop budgets and other resources related to the project.

#### **Why a berry farm business summary?**

Berry project team members are building on a the Cornell-developed Fruit Farm Business Summary (FFBS), which has helped tree fruit growers improve their return on investment (ROI) for more than a decade. According to a study by Dyson School professor emeritus Gerald White, the FFBS "identifies the business and financial information they (growers) need and provides a framework for use in identifying and evaluating the strengths and weaknesses of the farm business."

Experience with tree fruit growers using FFBS shows they quickly identify practices that are more costly than state benchmarks and address why their individual costs are higher.

## Upcoming Berry Events

**February 27, 2013.** *All Day Blueberry School*, in Gettysburg, PA. More information follows below.

**February 27 – March 1, 2013 –** *US Highbush Blueberry Council Spring Meeting*, in Savannah, GA. More information: 916-983-0111 or [www.blueberry.org](http://www.blueberry.org).

**March 6-7, 2013.** *Farm Food Safety Training with GAPs (Yates County)*, Penn Yan, NY. More information or to register: <http://www.gaps.cornell.edu/eventscalender.html>

**March 13-14, 2013.** *Farm Food Safety Training with GAPs (Suffolk County)*, Riverhead, NY. More information or to register: <http://www.gaps.cornell.edu/eventscalender.html>

**April 11, 2013 –**Highbush *Blueberry Production Workshop*, in Hamden, NY. More information follows below.

**June 17-19, 2013 –** *Berry Health Benefits Symposium*, in Concord, NC. Join leading researchers and industry leaders to learn about the newest research in this field. Held biennially; this fourth Symposium will be the first time the event has been held on the East Coast. For more information, contact [catmc@peak.org](mailto:catmc@peak.org). Info about the 2011 Symposium may be found at [www.berryhealth.org](http://www.berryhealth.org).

**December 4-7, 2013 –** *Joint North Carolina Strawberry Growers Association and North American Strawberry Growers Association Conference*, Sheraton Imperial Hotel, Durham, North Carolina. More information: [info@ncstrawberry.com](mailto:info@ncstrawberry.com) or [www.ncstrawberry.com](http://www.ncstrawberry.com).

## News Briefs

### Highbush Blueberry Production Workshop

April 11, 2013, 10:00 a.m. – 4:00 p.m.  
Cornell Cooperative Extension of Delaware County, Hamden, NY

Cornell Cooperative Extension of Delaware County is pleased to offer a program on highbush blueberry production, to be held at Extension's Resource Center, 34570 State Highway 10, Hamden, NY, 13782 on Thursday, April 11, from 10:00 a.m. to 4:00 p.m. with sign-in beginning at 9:30 a.m. Cornell's berry specialists will cover the key topics in production and marketing of blueberries in New York State.

Dr. Marvin Pritts, Professor & Department of Horticulture Chairman, Cathy Heidenreich, Berry Extension Specialist, Kerik Cox, Associate Professor, Plant Pathology, and Greg Loeb, Professor, Department of Entomology will discuss site selection, soils, pollination, cultivars, insect and disease identification and management of blueberries. They will also address pruning basics and the economics of growing and selling blueberries.

The registration fee for this program is \$20 per person or \$35 per farm couple – please make

check payable to "Cornell Cooperative Extension" and indicate "blueberries" on the check. Pre-registration & payment are required by April 4, 2013. Mail check to Cornell Cooperative Extension, P.O. Box 184, Hamden, NY 13782. A light lunch is included. Space is limited, so register early.

For more information or directions, call 607-865-6531 or e-mail Janet Aldrich at [JLA14@cornell.edu](mailto:JLA14@cornell.edu). A program brochure/registration form can be found online at: [www.ccedelaware.org](http://www.ccedelaware.org). Accommodations for persons with disabilities may be requested by contacting Janet Aldrich by April 4, 2013. Requests received after this date will be met when possible.

This program is being funded by the Watershed Agricultural Council and the New York City Department of Environmental Protection in partnership with Cornell Cooperative Extension of Delaware County. The Watershed Agricultural Council is an equal opportunity provider and employer. Cornell Cooperative Extension in Delaware County provides equal program and employment opportunities.

**NEW! Diseases, Pests, and Beneficial Organisms of Strawberry, Raspberry, and Blueberry**

By Liette Lambert, Odile Carisse, Ginette H. Laplante, and Charles Vincent  
©2013; 4.25" x 7.25" spiral bound; 344 pages; 700 color images and illustrations.

Originally published in French, this versatile pocket guide has 126 descriptive entries with more than 700 high resolution color photos and illustrations to help identify pest problems and better understand the beneficial organisms present in strawberry, raspberry and highbush blueberry.

It is an excellent visual scouting tool when viewing symptoms, but also provides information about life cycle, conditions, and best practices with background information on the main phenological stages of the crops, diseases, insects and other organisms, screening and diagnosis. A useful glossary is included.

The guide was created in response to a simple request from strawberry, raspberry and highbush blueberry producers in Quebec to provide photographs to help them identify problems in their crops.

The guide clearly meets a need in the berry industry to facilitate crop monitoring and diagnosis in Canada, the United States, and should apply to other berry growing regions.

This Guide will help advis-

## News Briefs

ers and the berry producers they serve to manage their crops more effectively.

Diseases, Pests and Beneficial Organisms of Strawberry, Raspberry, and Blueberry enhances the information in the APS PRESS Compendium of Plant Disease Series covering these crops.

This title is published by The Reference Centre of Agriculture and Agri-Food Canada and exclusively distributed outside of Canada by APS PRESS. Excellent quality and value priced at \$47.00!

The book is expected to ship in April 2013. Pre-order now call toll free 1-800-328-7560 or online <http://www.apsnet.org/apsstore/shopapspress/Pages/02301.aspx>.

### OSU aims to Increase Blueberry Yields with Bumblebees

**January 7, 2013. CORVALLIS, Oregon.** – Oregon State University aims to see if creating more foraging habitat for bumblebees will increase the pollination and yield of blueberry bushes, which mostly depend on bees to turn their blossoms into berries. OSU researchers will determine if bordering fields with vegetation that blooms from early spring to late fall will attract bumblebees and other native bees searching for pollen

for food. The scientists hope that while the bees are at it, they'll pollinate the nearby blueberry flowers, which only blossom for a short time in the spring.

"It's very important to give native pollinators a reason to hang around blueberries," said Sujaya Rao, an OSU entomologist working on the project. "Just one fruit crop with three or four weeks of bloom is not enough to sustain a bumblebee colony. If more native pollinators, like bumblebees, can be attracted, the pocketbooks of blueberry growers would benefit." Rao is seeking blueberry growers in the Willamette Valley who are willing to participate in the study. She'll ask them to plant native or exotic flora that is attractive to bees, such as rosemary, germander, California lilac, sage and red clover. The plants would serve as food – not housing – for the bees, which live in holes in trees or in abandoned rodent borrows in the ground.

Researchers will then estimate the numbers of native bees in fields with and without the hedgerows and they'll measure the blueberry yield.

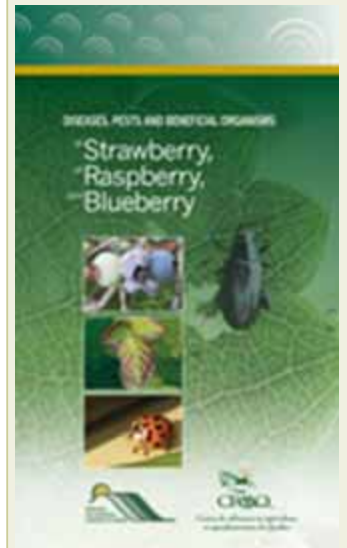
Funded by the U.S. Department of Agriculture, the research is part by a five-year project led by Michigan State University addressing challenges faced by specialty crop industries, including vegetable, berry, fruit tree,

and nut growers across the country.

Because bees are essential to the pollination of blueberries, Oregon growers typically place rented honeybee hives near their fields, but that can cost more than \$100 per acre. And honeybees have their limitations as pollinators of blueberries. Unlike bumblebees, they can't "buzz pollinate," which occurs when the bees' vibration releases pollen from deep inside the anthers of certain flowers. Blueberry bushes produce larger, more plentiful fruit when buzz-pollinated.

Also, unlike bumblebees, honeybees aren't active in cold, wet weather, which is abundant in the Willamette Valley spring. Blueberries were Oregon's 19th most important agricultural commodity in 2011 in terms of gross sales, according to a report by the OSU Extension Service. Farmers sold \$74 million of the fruit, up from \$57 million in 2010, the report said. Growers harvested more than 60 million pounds on 8,137 acres in 2011.

In 2012, Oregon became the only U.S. state allowed to export blueberries to South Korea. The South Asian country imported nearly 500,000 pounds from Oregon in the first year, according to the Oregon Department of Agriculture.



*"Just one fruit crop with three or four weeks of bloom is not enough to sustain a bumblebee colony.*

*If more native pollinators, like bumblebees, can be attracted, the pocketbooks of blueberry growers would benefit."*





## NYS Ag & Markets News



*"Whether you operate on two acres or 2,000, the information gathered from all producers is important, so it can provide a true picture of U.S. agriculture today and help everyone plan appropriately for tomorrow's needs."*

### New York Farmers are responding to the Census – Are You?

*USDA Says, "It's not too late"*

**A**lbany, NY, February 11, 2013 – New York farmers and ranchers are not missing an opportunity to have their voices heard and their farms represented in the 2012 Census of Agriculture. According to the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS), over 22,000 Census forms were submitted by state farmers, helping ensure New York's communities and agricultural industry have a voice in the future. For producers who missed the deadline, NASS is alerting them that it's not too late to be counted.

"Every New York farm and ranch is important and needs to be counted in the 2012 Census of Agriculture," said King Whetstone, Director of the NASS, New York Field Office. "Whether you operate on two acres or 2,000, the information gathered from all producers is important, so it can provide a true picture of U.S. agriculture today and help everyone plan appropriately for tomorrow's needs."

Conducted only once every five years by NASS, the Cen-

sus provides detailed data covering nearly every facet of U.S. agriculture at the national, state and county levels. It looks at land use and ownership, production practices, expenditures and other factors that affect the way farmers do business. Decision makers and commodity groups at the local and state level use the Census of Agriculture to make decisions that directly impact New York farmers, their businesses and their communities.

The deadline for submitting Census forms was February 4, and many New York producers have responded. However, those who have not responded will receive a second copy of the form in the mail to give them another opportunity. Farmers can return their forms by mail or online by visiting a secure website, [www.agcensus.usda.gov](http://www.agcensus.usda.gov). Federal law requires all agricultural producers to participate in the Census and requires NASS to keep all individual information confidential.

"If you have questions about the Census or need help filling out your form, I encourage you to visit [www.agcensus.usda.gov](http://www.agcensus.usda.gov) or call 1-888-4AG-STAT (1-888-424-7828)," added Whetstone. "NASS has helpful tips available and people standing by to pro-

vide assistance – we want to help you make the Census a successful and complete count of all New York agriculture."

The Census of Agriculture is your voice, your future, your responsibility.

### New York Strawberry Production Decreases

**A**lbany, NY, January 28, 2013 Strawberry production in New York was down 11 percent from 2011 to 3.20 million pounds, according to King Whetstone, Director of USDA's National Agricultural Statistics Service, New York Field Office.

The value of utilized production is estimated at \$6.88 million, down 19 percent from the \$8.46 million in 2011. New York ranks eighth in strawberry production. Nationally, the strawberry crop for 2012 was placed at 3.01 billion pounds, up 4 percent from 2011.

Production of blueberries for the Empire State was at 2.00 million pounds, up 5 percent from 2011. The 2012 crop is valued at \$3.89 million, down 2 percent from the \$3.96 million last year. The U.S. estimate for blueberries is 473 million pounds, up 7 percent from 2011.

New York's berry crop had a combined total value of





## USDA News



### Statement by U.S. Agriculture Secretary Tom Vilsack on 2013 Farm Income Forecast

**W**ASHINGTON, Feb. 11, 2013 – United States Agriculture Secretary Tom Vilsack today issued the following statement about the 2013 farm income forecast from USDA's Economic Research Service:

"Today's forecast for the strongest net farm income in four decades is another positive testament to the resilience and productivity of U.S. farmers and ranchers. American agriculture continues to endure an historic drought with tremendous resolve, and last year was an important reminder of the need for a strong safety net.

The commitment of American producers to embrace innovation and adapt to new challenges has helped fuel growth for American agriculture over the past five years.

I am also heartened that our farmers' keen business sense is continuing the recent trend of strong farm finances, with farm equity set to reach another record high in 2013.

In the past year, President Obama and I have ensured that USDA carried out every possible measure to support farmers and ranchers in a tough, uncertain time.

We know that today's positive economic forecast is no signal to let up, especially with regard to

providing smart and defensible assistance for America's dairy and live-stock producers who today do not have access to a viable safety net.

To help all farmers and ranchers continue their efforts in the years ahead, and to ensure the certainty of a strong safety net, it is critical that Congress act on a multiyear, comprehensive Food, Farm and Jobs Bill as soon as possible."

Highlights from the 2013 Farm Income Forecast are available at: <http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-2013-farm-income-forecast.aspx>.





### Contact Information:

Kevin Schooley  
Executive Director  
30 Harmony Way  
Kemptville, Ontario  
K0G 1J0

Phone: 613 258-4587

Fax: 613 258-9129

Email: [info@nasga.org](mailto:info@nasga.org)

<http://www.nasga.org/>



### Why Do You Join An Association?

You don't buy a newspaper, you buy news.  
You don't buy life insurance, you buy security.  
You don't buy glasses, you buy vision.  
You don't buy awnings, you buy shade.

You don't buy membership in an association... You buy the cooperation of people in your profession with whom you can join hands to do the things you can't do alone.

**J**oining any organization involves a certain commitment especially where dues are required for membership.

This is exactly what the North American Strawberry Growers Association (NASGA) represents ... those growers, nurserymen, researchers, extension specialists, and suppliers who want to get the most out of growing strawberries.

This commitment to doing one's best doesn't guarantee overnight success, but it does mean that you will be exposed to resources of people and information to put you on the right path toward personal and financial achievement.

Here's what you can expect to gain from the North American Strawberry Growers Association:

## NASGA NEWS

Access to the top strawberry researchers and horticulturists in the United States and Canada. At our three-day annual meeting held in the winter, there is ample time to speak directly with scientists and professionals who are vitally interested in your concerns.

Timely publications that give you the latest information on production methods and new marketing techniques such as the newly redesigned and enlarged quarterly newsletter. These publications are for members only to keep you up-to-date and save you time and effort searching through university libraries or a multitude of magazines for what is new and valuable for strawberry growers.

New ideas developed by other growers. A true sign of a successful grower is a willingness to share knowledge gained from personal successes and failures. Such sharing is a major component of our annual meeting. In addition, our membership directory give you a chance to contact other members for their advice or support.

NASGA works for you as a lobby for berry growers on the national level. Our success depends upon your participation and support. This is a critical time during which we see

university research and extension programs under very close scrutiny that often results in cutback of financial support. You can show support as constituents of the strawberry industry by joining together in NASGA. University, USDA, and Provincial administrators clearly see our commitment as we contributed over \$50,000 toward research projects this year.

NASGA supports your marketing efforts through special publications offered by NASGA to assist you and promote strawberries to your customers. Each Annual Conference has several sessions dedicated to marketing related topics.

If you grow and market strawberries and other small fruits, educate or consult, or are exploring the myriad dimensions of small fruit growing as a career, then it is time to recognize that the North American Strawberry Growers Association is a valuable key to your success!

We invite you to join NASGA and take advantage of new experiences and friendships while strengthening the solid foundation of information needed to be a successful grower.



## NARBA NEWS

### NARBA Gives 2013 Distinguished Service Award to Mark Bolda

At the North American Berry Conference on January 30, 2013 the North American Raspberry & Blackberry Association (NARBA) presented its Distinguished Service Award for 2013 to Mark Bolda, a University of California Farm Advisor.

In presenting the award, NARBA Executive Secretary Debby Wechsler noted that he has been important both to the association and to the raspberry/blackberry industry as a whole—as well as to strawberries.

He was one of the first to identify and draw attention to spotted wing drosophila, a new invasive pest in berry crops, and has taken the lead on developing management programs for this pest and others.

One grower she asked about Bolda commented,



“He is plain and simply an outstanding farm advisor who cares about the needs of growers and finding solutions for their problems.”

Mark Bolda served on NARBA’s Board of Directors 2007 through 2010. He played a leading role in organizing NARBA’s conference and farm tour in Monterey, California, in 2010 and was also a planner and presenter for the Association’s current conference in Portland, Oregon.

Bolda has been the Strawberry and Caneberry Farm

Advisor in Santa Cruz, Monterey and San Benito Counties since May, 2002 and is serving as the County Director for Santa Cruz County as of September 1, 2012.

NARBA is a nonprofit membership association of caneberry growers, chartered in 1987, with members in 36 states, 8 Canadian provinces, and 5 countries.

The North American Berry Conference, held in Portland, Oregon, on January 27-30, 2013, was a joint meeting with the North American Strawberry Growers Association (NASGA).

This is the fourth year that NARBA has presented this award. Previous winners were grower Ervin Lineberger, of Kings Mountain, NC; Dr. Marvin Pritts, Cornell University Department of Horticulture; and Dr. John Clark, University of Arkansas blackberry breeder.

For more information about the association, visit [www.raspberrylblackberry.com](http://www.raspberrylblackberry.com).



### Contact Information:

Debby Wechsler,  
Executive Secretary  
1138 Rock Rest Rd.  
Pittsboro, NC 27312

Phone: 919-542-4037

Fax: 866-511-6660

E-mail: [in-fo@raspberryblackberry.com](mailto:info@raspberryblackberry.com)

<http://www.raspberrylblackberry.com/>





# 2013 Membership Application

NASGA's annual membership year is from January 1 to December 31

<p><b>Farms, Nurseries or Suppliers to the Industry</b></p> <p><b>Business Membership</b>  <input type="checkbox"/> Grower/Farm  <input type="checkbox"/> Nursery business selling to growers  <input type="checkbox"/> Other suppliers to the strawberry industry          Membership Includes: Newsletter subscription, reduced registration fees for NASGA events, website listing, a Membership Resource Directory and voting privileges.</p> <p><i>If you are rejoining and were a member in 2010-2012, pay regular dues of:</i></p> <p><input type="checkbox"/> \$175 for USA, Canada &amp; Mexico (US dollars)  <input type="checkbox"/> \$190 for other countries (US dollars)</p> <p><i>New Member:</i></p> <p><input type="checkbox"/> \$85 for USA, Canada &amp; Mexico (US dollars)  <input type="checkbox"/> \$95 for other countries (US dollars)</p> <p><b>For All Members:</b></p> <p><input type="checkbox"/> I would prefer to receive my newsletter electronically</p>	<p><b>Industry Related Professionals or Students</b></p> <p><b>Individual Membership</b>  <input type="checkbox"/> Professional (public employee, researcher, extension specialist, county agent, etc who is not affiliated with a commercial strawberry operation, nursery or supplier)  <input type="checkbox"/> Student (college or high school) Application must have advisor's signature. _____</p> <p>Membership includes: Newsletter subscription, reduced registration fees for NASGA events, website listing, and a Membership Resource Directory.</p> <p><input type="checkbox"/> \$55 for USA, Canada &amp; Mexico (US dollars)  <input type="checkbox"/> \$65 for other countries (US dollars)</p> <p><b>Corporate Membership</b>          Membership includes up to \$400 in newsletter advertising  <input type="checkbox"/> \$500 for USA, Canada &amp; Mexico (US dollars)</p>
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**Information for NASGA's Membership Records**

**NOTICE: The NASGA Board of Directors has found that electronic communication is the most time-efficient and cost-effective method transmitting important information about the organization. By supplying your email and fax information you are agreeing to accept notices and news as part of your membership. In turn, NASGA pledges to respect your privacy and will do its best to protect you from unsolicited communications by third parties.**

Primary Contact Name \_\_\_\_\_

Farm/Business/Affiliation \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State/Prov \_\_\_\_\_ Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Personal Phone \_\_\_\_\_ Daytime Fax \_\_\_\_\_

Email \_\_\_\_\_ Website \_\_\_\_\_

**Information for NASGA's Directory and Website ([www.nasga.org](http://www.nasga.org))**

NASGA's website has a search feature where the public can "Find a Grower" or a grower can locate a supplier or industry expert. The information you have supplied for the NASGA database will also be used on the website and in the NASGA Membership Resource Directory. Contact the business office to provide different information for the directory or website. If you prefer NOT to be listed on the website check here \_\_\_\_\_. For questions or requests for changes email: [info@nasga.org](mailto:info@nasga.org) or call: 613-258-4587

**Enclosed is Total Payment in the Amount of \$ \_\_\_\_\_ (US dollars) (Our Federal ID # is 31-0994392)**

- To **MAIL** payment, send completed form with cheque or money order payable to **NASGA (in US funds only) to: NASGA Business Office, 30 Harmony Way, Kemptville, ON Canada K0G1J0 Phone: 613-258-4587 Email: [info@nasga.org](mailto:info@nasga.org)**

- Or **FAX** membership form with credit card payment noted below to: Fax – 613-258-9129

Credit Card Information:  Visa  MasterCard Acct. Number \_\_\_\_\_ Exp. Date \_\_\_\_\_

\_\_\_\_\_  
Name on Card (print)

\_\_\_\_\_  
Signature





## MEMBERSHIP RENEWAL

Please fill out the form below and return it with your annual dues payment. We look forward to having you as a member again.

Name(s) \_\_\_\_\_ Date \_\_\_\_\_

Farm/Company/Institution \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Country \_\_\_\_\_

Phone #1 \_\_\_\_\_ (  home  work  farm  cell  toll-free )

Phone #2 \_\_\_\_\_ (  home  work  farm  cell  toll-free )

E-mail \_\_\_\_\_

Fax \_\_\_\_\_ Website \_\_\_\_\_

I prefer to receive newsletters  through the mail  by email (pdf file)

**GROWER MEMBERSHIPS – \$85** (1/4 of grower dues goes directly to the North American Bramble Growers Research Foundation.) \$ \_\_\_\_\_

**Grower Acreage Charge:** \$5 per acre, maximum acreage charge \$100 \$ \_\_\_\_\_

**OTHER MEMBERSHIP CATEGORIES** \$ \_\_\_\_\_

- Researcher, extension, student:** \$40
- Industry** (suppliers, processors, marketers, etc.): \$150
- Affiliate organization** \$150

**ADDITIONAL DONATION** to the NABG Research Foundation (tax deductible) \$ \_\_\_\_\_

**DISCOUNT PUBLICATIONS (optional):** (Contact the NARBA office if you wish to order recipe brochures)  
NRAES Raspberry & Blackberry Production Guide (discount off NRAES price) \$ \_\_\_\_\_

\$35 to members, \$40 non-members

American Fruit Grower  Free in U.S.  Canada \$15  International \$25 \$ \_\_\_\_\_

Fruit Grower News  Free in U.S.  Canada or International \$35 \$ \_\_\_\_\_

**TOTAL PAYMENT** \$ \_\_\_\_\_

PAYMENT by  Check All fees in US funds only, please.  MasterCard  Visa  Discover

Credit card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

*What are the major barriers to success in your raspberry/blackberry operation?*

*How can NARBA best help you– with these or other issues?*

*Suggestions and comments:*

Send to NARBA, 1138 Rock Rest Rd., Pittsboro, NC 27312 or fax to 866-511-6660 (toll-free).  
Error in our records? Questions? Email [info@raspberryblackberry.com](mailto:info@raspberryblackberry.com) or call 919-542-4037.

**NYSBGA NEWS**

**We are Making Progress....**

*Dale-Ila M. Riggs, President, NYS Berry Growers Association*

It's the middle of February and the Board of the Berry Growers Association has been very active in Albany.

Several of us visited with legislators, the Governor's staff, and the Department of Ag and Markets for two days at the very end of January.

We have requested funding of \$200,000 a year for three years in a row to address research and outreach efforts to combat Spotted Wing Drosophila.

Without answers on how to manage this pest that get to growers quickly, it will be very difficult for growers to maintain the viability of raspberry or blueberry plantings in NYS.

And we are being heard!

The Division of Plant Industry at Ag and Markets is working hand in hand with us to investigate funding sources.

Senator Ritchie (she is the chair of the Senate Ag Committee) is supportive. I've had several conversations with Assemblyman Magee's office as well and they are sympathetic to our need.

Just yesterday, I made a presentation to the Inva-



sive Species Council of NYS. They recommend projects that should receive funding from the Invasive Species line of the Environmental Protection Fund.

One of the council members was moved to tears when she heard that she may have difficulty finding locally grown raspberries and blueberries, and what the ramifications of that are for the farms and communities where these crops are grown.

But we still need your help.

PLEASE make your own senator and assembly representative aware of the problems that Spotted Wing Drosophila caused on your farm last year. Tell them what will happen on your farm if you cannot grow raspberries or blueberries.

Remember that we have a place at the table and we

are being heard BECAUSE we are an ASSOCIATION.

But associations don't exist without members. All the Board members pay for their visits to Albany out of their own pocket; they cover their trips to Board meetings out of their own pocket.

They volunteer their time to talk with representatives and make presentations on your behalf. I

f you are able to grow raspberries or blueberries in the future because the Board is successful in obtaining funding for research that develops management schemes that work, it will be because of a lot of effort that the board has spent on your behalf.

So please, if you haven't sent in your membership for this year, do so today.



*"New York State  
Berry Growers  
Association*

Paul Baker  
Executive Director  
3568 Saunders Settlement Road  
Sanborn, NY 14132

Phone: (716) 807-6827

[goodberries@roadrunner.com](mailto:goodberries@roadrunner.com)

<http://www.hort.cornell.edu/grower/nybga/>

## ON THE ORGANIC SIDE...

### 2013 Organic Certification Cost Share Program

Are You a Farmer or Rancher in One of These States?

Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Jersey, New Hampshire, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, Wyoming

If so, you are eligible to receive a 2013 organic certification cost share reimbursement!

### Amount of Reimbursement

Organic crop and livestock producers in the states listed above can be reimbursed as much as 75 percent of their certification costs from October 1, 2012 through September 30, 2013, up to a maximum of \$750.

This program is not competitive; \$1.425 million is available for farmers and ranchers in the States listed above.

### How to Get Reimbursed

Contact your State's department of agriculture (or its equivalent) for an application.

Assemble the following supporting documentation: proof of USDA organic certification, itemized invoice showing expenses paid for certification, W-9 tax form, and anything else required by your State.

### New York State Program Update

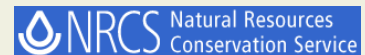
Ms. Sarah Johnston from the NY State Department of Agriculture and Markets confirmed today this program will be available for the 2013 season in New York. She explained program funding for the above listed states is

through a federal program that is outside the Farm Bill. Funding for other states, such as North Carolina, for example, is tied to Farm Bill passage.

Ms. Johnston anticipates information and forms for the 2013 program will be updated on their web site shortly: <http://www.agriculture.ny.gov/AP/Organic/reimbursement.html>.

She noted that last year reimbursement was available for both organic farmers and organic processors. However, for the 2013 season the reimbursement program for organic processors remains tied up in Farm Bill discussions.

It is unclear whether the program will be retroactive depending on the outcome of the discussions.

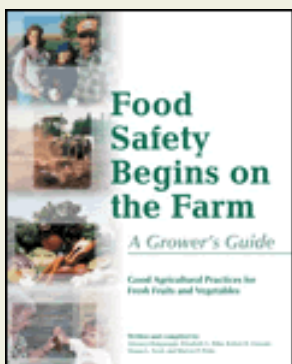






## GAPsNET

*Good Agricultural  
Practices Network  
for Education and  
Training*



### Save the Dates: FSMA Public Meetings on the Proposed Rules for Pre- ventive Controls in Hu- man Food and Produce Safety Standards

If you are looking for other ways to get involved or learn more about the proposed regulations, the FDA has announced they will be hosting three public meetings in Washington, D.C., Chicago, IL, and Portland, OR. For more information about registration and each meeting location, date, and time, please visit the links below.

**Washington, DC**  
**Feb. 28 & Mar. 1, 2013**  
(<http://www.fda.gov/Food/FoodSafety/FSMA/ucm336329.htm>)  
Jefferson Auditorium  
U.S. Department of Agriculture, 14th and Independence Avenue, SW, Wing 5 Entrance  
Washington, DC 20250

**February 28, 2013**  
8:30 am - 5:00 pm  
**March 1, 2013**  
8:30 am - 12:00 pm

**Chicago, IL**  
**Mar. 11 & 12, 2013** (  
<http://www.fda.gov/Food/FoodSafety/FSMA/ucm339097.htm>)  
The Westin-Michigan  
Avenue, 909 North Michigan Avenue  
Chicago, IL 60611

## Focus on Food Safety

**March 11, 2013**  
8:30 am -5:00 pm

**March 12, 2013**  
8:30 am -12:00 pm

**Portland, OR**  
**Mar. 27 & 28, 2013**  
(<http://www.fda.gov/Food/FoodSafety/FSMA/ucm339096.htm>)  
Crown Plaza Portland  
Downtown Convention  
Center, 1441 NE 2nd Avenue  
Portland, OR 97232

**March 27, 2013**  
8:30 am - 5:00 pm

**March 28, 2013**  
8:30 am - 12:00 pm

### Mark Your Calendars for 2013 GAPs Trainings

There are still 2 out of 5 planned 2-day Good Agricultural Practices (GAPs) workshops scheduled for this winter and spring remaining for growers to attend. This is for those farmers who are being required by buyers to provide third party verification of their food safety practices and for farmers thinking about moving in this direction. With the Food Safety Modernization Act draft FDA regulations to be released in the very near future, the timing of these workshops is paramount. Although the 2-day workshops will cover the vast majority of what most 3<sup>rd</sup>-party audit companies

require, it will be geared towards the new Harmonized GAPs standards that Wegman's and many other retailers are requiring. These are sponsored by Genesee Valley Regional Market Authority (except the Long island training), Cornell Cooperative Extension, Cornell University, the Produce Safety Alliance, and the New York State Department of Ag & Mkts.

**March 6-7, 2013.** General GAPs training for all fresh produce growers, location: CCE-Yates, Penn Yan.

**March 13-14, 2013.** General GAPs training for all fresh produce growers, host CCE-Suffolk, Riverhead.

For more information and updates, see: <http://www.gaps.cornell.edu/eventscalendar.html>

Registration info will be up approximately 4-6 weeks before the workshops.

For more info, contact Craig Kahlke at [cjk37@cornell.edu](mailto:cjk37@cornell.edu) or 585-735-5448.

## Tunnel Talk

**Tunnel technology could help Florida blueberry growers, UF/IFAS study suggests—Tom Nordlie, University of Florida**

November 20, 2012.  
GAINESVILLE, Fla.  
— Protecting Florida's \$80 million blueberry crop from freeze damage is always a wintertime challenge, but a University of Florida study shows that structures called high tunnels could shield plants from cold and promote earlier fruit ripening. Though the initial investment can run from \$18,000 to \$25,000 per acre plus labor, high tunnels deliver better quality fruit, bigger early yields and higher prices if growers beat competitors to market, said Bielinski Santos, an associate professor with UF's Institute of Food and Agricultural Sciences.

The study, published in the current issue of HortTechnology, tracked two growing seasons on a commercial blueberry farm in Alachua County. The results showed that temperatures outside the tunnels plunged to freezing or near-freezing 61

times during the study. Temperatures fell that low just three times inside the unheated tunnels.

High tunnels may increase air and soil temperatures and protect the plants from wind and rain damage, leading to better flowering and more fruit, said Santos, based at UF's Gulf Coast Research and Education Center in Balm.

Plants grown in the tunnels produced about 4.5 tons of ripe fruit per acre by the end of March; no ripe fruit came from similar plants grown outdoors during that time. Whole-



Blueberry plants grow inside a high tunnel at the University of Florida's Gulf Coast Research and Education Center in Balm. Photo by Bielinski Santos, University of Florida/IFAS

sale prices for domestic blueberries are highest early in the season, starting at about \$7 per pound in early April, he said.

"Usually, Florida growers start harvesting in early April," Santos said. "The more fruit you can harvest early in the season, the

more money you'll make."

Growers can also save money with high tunnels because they minimize the need for another freeze protection strategy – sprinkling the plants with water to form a layer of ice. In the study, tunnel-grown plants needed about one-tenth the water for freeze protection as plants grown outdoors.

The study involved two blueberry varieties developed at UF, Snow Chaser and Springhigh. Snow Chaser is especially well-suited to life in high tunnels, Santos said.

Made by stretching thick plastic sheeting across an arched frame, high tunnels resemble Quonset huts, he said. Although they have variable

dimensions, most tunnels have roofs anywhere from 8 to 20 feet high, with ends and sides that can be open or sealed, depending on the weather.

The technology is popular in other parts of the world but still catching on in the United States, Santos said.



### Contact :

Dr. Bielinski Santos,  
Horticultural Sciences  
Univ. of Florida/IFAS  
Gulf Coast REC  
14625 CR 672,  
Wimauma, FL 33598  
(813) 633-4128  
FAX (813) 634-0001  
[bmsantos@ufl.edu](mailto:bmsantos@ufl.edu)

[Read the full study in HortTechnology](#)

*"Performance of Southern Highbush Blueberry Cultivars Under High Tunnels in Florida"*

*Bielinski M. Santos and Teresa P. Salame-Donoso*

## Tunnel Talk –(continued)

In Florida, high tunnels and other protective structures account for about 250 acres of production, mostly for high-value crops such as blueberries, strawberries, tomatoes and bell peppers. “We always thought it was really complicated and expensive,” Santos said.

“So for the past six years I’ve tried to ‘vulgarize’ the technology and develop a system anyone can use.”

Santos said he knows of one Florida blueberry grower using high tunnels; the owners tried 2 acres in 2010 and later expanded to 80 acres. Others have expressed interest in the system.

Santos and co-author Teresa Salame-Donoso, a research associate at the Balm center, have begun collecting data for an economic study on blueberry production in high tunnels.

“We already have some numbers, and we’re collecting the kind of information growers need to make up their own minds about using high tunnels,” he said. “I see more people doing it eventually.”

(Source: [University of Florida News](#))



### Planning for profit - How to analyze high tunnel finances

**A**dding high tunnels to your farm won't automatically make you more profitable. Before you start investing in structures, you need to push a pencil or play with spreadsheets to make sure that your efforts will result in financial – as well as horticultural – success.

For planning purposes you will need to know fixed costs associated with all of your agricultural enterprises including taxes, depreciation on multi-purpose buildings, etc. in order to put together a comprehensive whole farm budget, but also to help project costs over time. You should also have a reasonable idea of what your variable costs might be.

Use **enterprise budgets** to compare the potential profitability of different crops that you might plant in the high tunnel. Then use that information to examine the profitability for a high tunnel in your current farm operation.

You can use **partial budgets** to analyze the impact of small changes on the profitability of your production system.

### First, some definitions:

**Fixed cost:** A cost incurred even if nothing is produced. This would include the cost of constructing and outfitting a tunnel, then depreciating those costs along with the interest on borrowed money and costs associated with property taxes, office expenses, marketing fees and any other fees that are constant.

**Variable cost:** The cost of inputs that are incurred only if you actually produce something. These input costs change depending upon the quantity and price. Variable costs increase as production increases and decrease as production slows. Good examples include seed, fertilizer, fuel, and pesticides. You can change variable costs to alter the production process, but once you have incurred the expense, it becomes a fixed cost associated with that production cycle.

**Whole farm budget:** A projection of the total production, income, and expense for the entire farm business. It's important to have one if you are approaching a lender.

### Enterprise budgets vs. partial budgets

**Enterprise budgets** estimate the profitability of the enterprise by listing all associated income and expenses. They compare the profitability of various enterprises on the farm and are helpful when preparing whole farm or cash flow budgets. Comparing high tunnel tomato production to field tomato production is a good example.

Another comparison would be examining two different crops in a high tunnel to determine which would be the most profitable.

**Partial budgets** calculate the effect of change on profitability. They do not provide an estimate of absolute profitability like an enterprise budget might, because partial budgets only provide a profitability estimate of the alternative practice relative to current operations.

### Calculating depreciation

Depreciation is an annual non-cash expense that recognizes the amount an asset loses value due to use, age, and obsolescence. The cost of your tunnels can be depreciated over time.



## Tunnel Talk – (continued)

Be mindful of restrictions to depreciating horticultural structures. A horticultural structure is defined as a structure specifically designed, constructed, and used for the commercial production of plants.

Some restrictions apply: A structure must be used only for the purpose that qualified it.

For example, using part of your greenhouse to sell plants will make the greenhouse non-qualifying property.

If a structure includes work space, the work space can be used only for the following activities.

- Caring for plants or their produce.
- Maintaining the enclosure or structure.
- Maintaining or replacing the equipment housed in the structure.

Keep in mind that in the first year you are only allowed to take half of the eligible depreciation.

Depreciation rules are found in [The Farmers Tax Guide, IRS pub. #225](#).

Farmers can choose their cost recovery system but a single purpose horticulture structure can be depreciated across 5, 10 or 15 years.

### Depreciating a High Tunnel

Farmer A's structure cost \$10,000 (including frame, covering, supplies, labor etc.).

Farmer A chose to depreciate it over a 10-year period, but wanted to write off more in the early stage of the tunnel. Therefore Farmer A chose a 150% declining balance recovery system. (This is faster than straight line so the farmer would get quicker payback over time for this relatively short lived investment.)

	Original cost	\$10,000
Year 1	\$750 1st year you can only depreciate half of eligible expense	
Year 2	\$1388	
Year 3	\$1179	
Year 4	\$1002	
Year 5-9	\$874	
Year 10	\$437 Value of tunnel is 0	

The balance recovery system best suited for you will depend upon your individual tax situation and the asset being depreciated. Consult IRS Section 179, "The Special Depreciation allowance" (or ask your tax specialist).

The amount of depreciation is claimed on Schedule F of your income as an expense.

(Excerpted from: <http://www.hort.cornell.edu/hightunnel/business/planning.htm>.)





## PIMS

Product, Ingredient, and Manufacturer System:

<http://pims.psur.cornell.edu/>



<http://www.omri.org/omri-lists>



## Berry Diagnostic Tool

<http://www.fruit.cornell.edu/berrytool/>

## Focus on Pest Management

**Disease Snapshot: Blueberry Anthracnose (Ripe Rot)**- Zachary Frederick, Graduate Student and Dr. Kerik D. Cox, Assistant Professor Plant-Pathology & Plant-Microbe Biology, Cornell University

**Causes:** *Colletotrichum gloeosporioides*

**When to watch for it:** Season long.

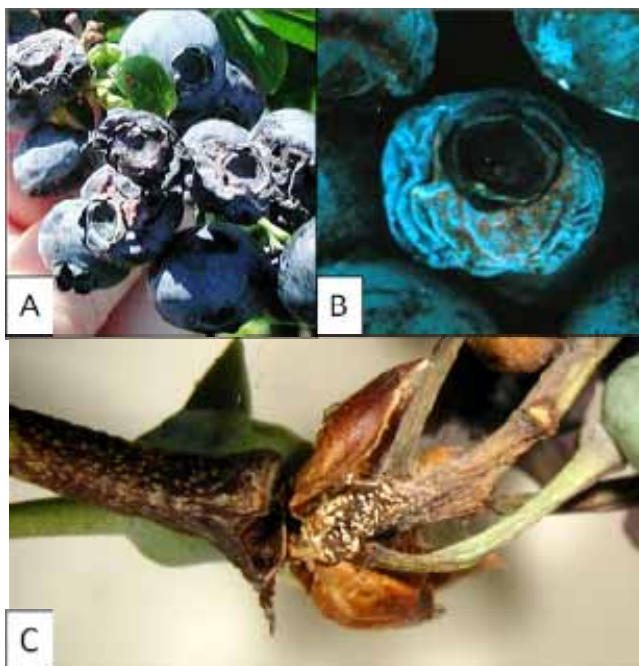
**First line of defense:** Removing infected wood as a source of overwintering inoculum.

**Summary:** *C. gloeosporioides* overwinters as mycelium in and on blighted twigs, and release conidia throughout the entire

growing season during rains. This creates blossom blight during bloom and latent infections in green fruit. Fruit rot occurs on blueberries as they mature, and starts with a softening of the fruit followed by a sunken appearance. Salmon-colored conidia exude from acervuli within these sunken patches during rainy periods. Leaves can also be infected, and lesions are often brown and irregularly shaped.

Losses from *C. gloeosporioides* infections are greatest during warm, wet weather in June and July, particularly just before harvest. The pruning of

dead shoots has been shown to reduce the overwintering inoculum. Applications of QoI fungicides including azoxystrobin and pyraclostrobin are effective for managing latent infections at bloom and pre-harvest disease by reducing the spread of secondary infections. Chlorothalonil is also effective in areas of high disease pressure when applied pre-bloom. Fungicides containing ziram, fenhexamid, and cyprodinil are also effective for preventing anthracnose infections.



Above, **A and B:** Fruit rot becomes apparent when just prior to harvest, but infections can occur during any point in fruit development. **C:** Blossom blight on blueberry showing release of conidia laden ooze just under the sepals.

## Focus on Pest Management (continued)

### Why Virus-tested Plants? Because It Makes Sense...

- Dr. Ioannis E. Tzanetakakis Dept. of Plant Pathology, Division of Agriculture, University of Arkansas

It is often quoted that the cheapest and most important factor for a successful berry farm is high quality propagation material. This is because one of the major caveats of clonally propagated crops is virus infections. It is common that a cultivar takes ten years between the original crossing and its release to the public. Breeding selections are grown in the field, in many cases without any protection from virus vectors and this translates, in the majority of cases, to plants infected with one or more viruses.

Berries are tolerant to infection of one or two viruses; in other words plants do not have visual symptoms during the propagation process although yield and fruit quality may be affected. The problem multiplies in the field when plants are infected with additional viruses. Symptoms appear and there is obvious and measurable impact in yield and field longevity.

There are numerous examples of virus complex diseases in the last few years: blackberry yellow vein, strawberry decline, raspberry crumbly fruit

with losses that account to the tens of millions of dollars.

The United States Department of Agriculture understanding the importance of clonally propagated crops in the agricultural economy and the problems that can emerge with problematic propagation material initiated the National Clean Plant Network (NCPN).

The role of NCPN is to bring close university and federal laboratories that work on clonally propagated crops and form a consortium that share knowledge and expertise. The mission statement is: *'The NCPN provides high quality asexually propagated plant material free of targeted plant pathogens and pests that cause economic loss to protect the environment and ensure the global competitiveness of specialty crop producers in the United States'.*

At this point NCPN is comprised of 16 Centers working of Berries, Grapes, Tree Fruits, Citrus and Hops with several other commodities ready to enter the network in the coming years. The NCPN Berries includes four centers: North Carolina State University (NCSU), University of Arkansas, University of California-Davis and USDA-ARS in Corvallis,

Oregon. The latter serves as the lead Center because of the long history and expertise associated with the location.

A short introduction of the Berry Centers and their role in NCPN:

- Berry Crops Testing and Therapy Program for Berry Crops, North Carolina State University, Raleigh, NC

The NCPN – B Center in the Micropropagation and Repository Unit (MPRU) at NC State University produces, maintains and supplies specific pathogen-tested plant material of berry crops (strawberry, blackberry, raspberry and blueberry) to scientists and industry. The program uses thermal therapy to eliminate viruses from plants and assesses plants for known viruses using laboratory tests and biological indexing.

- Berry Crops Testing and Development of Diagnostics, Department of Plant Pathology, Division of Agriculture, University of Arkansas, Fayetteville, AR

The primary emphasis of the program at the University of Arkansas is the development of new diagnostic assays to provide laboratory-based tests for all the virus and virus-like agents that infect strawberry, raspberry, blackberry and blueberry. This program is coordinated



<http://nationalcleanplantnetwork.org>



## Focus on Pest Management (continued)

with the other centers to implement the new tests into virus elimination and diagnostic programs. This center also works on the development of next generation diagnostics that will allow the detection of all pathogens affecting the crops using a single assay.

- Foundation Plant Services (FPS), University of California, Davis, CA

Foundation Plant Services (FPS) carries out virus elimination, tests, maintains and distributes virus-tested strawberry propagation stock from the University of California strawberry breeding program.

FPS research programs develop new techniques for disease detection and elimination to improve the quality of propagation materials.

- Research Unit, USDA-ARS, Corvallis, OR

The NCPN – B is headquartered at the USDA-ARS in Corvallis, where the clean plant center was initiated in 1967 in collaboration with Oregon State University and fully managed by USDA-ARS as part of the small fruit virology program since 1997.

The program works closely with breeders and nurseries to develop strawberry, blackberry, raspberry and blueberry

plants free of known viruses. The program uses thermal and chemotherapy to eliminate viruses from plants and indexes plants using bioassays and laboratory based assays.

The program in Corvallis is also involved in developing and implementing new diagnostic assays for viruses of these crops to improve the quality of the plants produced.

The plants that will be released by the Berry Centers will be of the best quality possible as they will be tested for all known viruses; minimizing the possibility of latent infections. In addition, and as part of the work done in Arkansas and Oregon, new techniques are being developed that have the capacity to detect both known and unknown viruses. This can potentially lead – for the first time ever – to **virus-free** plants.

We are also working with State regulators for the harmonization of certification protocols between states with the goal to develop a national certification scheme that would allow free movement of propagation material across the country.

Blueberry is well underway whereas the first meeting for Rubus (blackberry, raspberry and their hybrids) was done at

the end of May. The work of the NCPN-Berry Centers in combination with the National Certification efforts will allow growers across the country to use the best quality propagation material possible.

(Reprinted with permission from: [Small Fruit News](#) Vol. 13 No. 1, January 2013)

**ARS Works Toward Control of Brown Marmorated Stink Bug - [Sharon Durham](#) and [Dennis O'Brien](#), USDA Agricultural Research Service Information Staff.**

**T**he brown marmorated stink bug (BMSB) is wreaking havoc in U.S. homes, gardens, and agricultural operations, causing personal and economic woe. [Agricultural Research Service](#) scientists are exploring various aspects of monitoring and control of this increasingly important insect pest, which is an invasive Asian species known as a sporadic pest of many tree fruit crops in China, Korea, and Japan. Along with being a household nuisance, it is a major economic threat to producers of orchard fruits such as apple, peach, and pear; garden vegetables and row crops; and many ornamental species. Since its detection in the northeastern United States a decade ago, the

BMSB has been detected in 38 states and has earned the distinction of being classified as the top invasive insect of interest by the U.S Department of Agriculture. With economic losses to the apple industry estimated at \$37 million in 2010, the bug's threat to apple growers prompted a Member of Congress to organize a public hearing in western Maryland. There is also concern about the potential damage it could cause to vineyards in California and other states.

Tracy Leskey, with the Appalachian Fruit Research Station in Kearneysville, West Virginia, is the principal investigator of the research group, which includes several scientists in ARS's Invasive Insect Biocontrol and Behavior Laboratory in Beltsville, Maryland; Jana Lee, an ARS entomologist in Corvallis, Oregon; and Kim Hoelmer, director of the USDA-ARS European Biological Control Laboratory in Montpellier, France.

A major project led by Leskey, funded through the USDA-National Institute of Food and Agriculture's Specialty Crop Research Initiative Program, is called "Biology, Ecology, and Management of Brown Marmorated Stink Bug in Orchard Crops, Small Fruit, Grapes, Vegetables, and Ornamentals."

## Focus on Pest Management (continued)

While this is a mouthful, it goes to the heart of the damage that can be caused by this pest. The project is funded for 3 years with \$5.7 million in federal funds and \$7.3 million in matching funds. The group includes ARS, Pennsylvania State University, Washington State University, North Carolina State University, Virginia Polytechnic Institute and State University, Rutgers University, Northeastern IPM Center, Oregon State University, University of Maryland, University of Delaware, and Cornell University. The project will take advantage of research that ARS scientists have conducted on BMSB since it was detected in the United States in 2001. The project's progress can be followed on its website, [stopbmsb.org](http://stopbmsb.org).

### Setting the Trap

Growers need as much in-the-field information as possible to find ways to manage BMSBs.

"Monitoring tools are used to assess the presence, abundance, and seasonal activity of pests and natural enemies to determine the need for and timing of insecticide applications," says Leskey. "Specifically, our group evaluated responses of brown marmorated stink bugs using different visual stimuli, compared the



The brown marmorated stink bug is easily recognized by many because it's invading our homes. But the pest, shown here feeding on an apple, is also a major economic threat to fruit crops, garden vegetables, and many ornamentals. ARS scientists are fighting back by developing traps, sequencing the bug's genome, and testing parasitic wasps as biocontrols. (D2709-1)

effectiveness of commercially available traps from Asia with a black pyramid prototype trap, compared relative attraction to different doses of odor attractants, and conducted a field cage experiment designed to establish how often the brown marmorated stink bugs reproduce."

Leskey has focused on visual stimuli that can, in addition to odor stimuli, attract the BMSBs to traps

that will help farmers monitor the level of infestation in fields. We used pyramid-shaped traps of different colors—



Adult and late-instar nymph stink bugs, *Halyomorpha halys*, feed on a Honey Crisp apple, a popular cultivar among consumers. (D2709-6)

black, green, yellow, clear, white. In field trials in 2009 and 2010, we found significantly more stink bug adults and nymphs captured in the baited black pyramid traps than in the other traps," says Leskey. "Further, more adults and nymphs were captured in a trap placed on the ground than in a commercially available baited trap from Japan that we hung from a tree limb."

"We also found that in 2010 and 2011, brown marmorated stink bugs produced two generations in 1 year in Kearneysville, based on presence of eggs and newly molted adults in field cage experiments," says Leskey. "Although it has been reported that these bugs produce only one brood in eastern



Support scientist Starker Wright (left) and entomologist Tracy Leskey inspect traps baited with experimental pheromone lures. The lures are being tested for brown marmorated stink bug attraction. (D2707-4)

Pennsylvania, it appears that in more southerly locations within the Mid-Atlantic, they can produce two generations."

### Secrets of Attraction

Researchers at the ARS Invasive Insect Biocontrol and Behavior Laboratory (IIBBL) in Beltsville, Maryland, are leading the pivotal pheromone research efforts and genomics studies and partnering with Leskey on field tests of potential attractants for use in commercial traps. Scientists at IIBBL were working on the BMSB long before it became such a huge problem in the United States. Aijun Zhang, an analytical chemist, started looking for the BMSB pheromone in 2003, along with Ashot Khimian, a synthetic chemist, and Jeff Aldrich, an entomologist who retired in 2011. Khimian and Aldrich published results in the *Journal of*

## Focus on Pest Management (continued)

*Agricultural and Food Chemistry* and in *Tetrahedron*, showing that a compound identified as a pheromone of another stink bug was also a late-season attractant for the BMSB. When the BMSB emerged as a major pest in the United States, Aldrich and Khrimian began helping U.S. manufacturers develop traps with the attractant.

“Our work has already led to successful commercial products now on the market. But what we now have is only a late-season attractant, and because that doesn’t help growers as much as we would like, we still have work to do,”



RS scientists at Beltsville, Maryland, analyze reaction products to evaluate purities of synthetic lures for brown marmorated stink bug. Left to right: chemists Shyam Shirali, Ashot Khrimian, and Filadelfo Guzman. (D2712-2)

Khrimian says. In 2010, the team of scientists at IIBBL found an “aggregation pheromone” that shows promise as the main pheromone attractant for BMSB. This phero-

none is released by males when they feed, and it attracts both males and females. The scientists are trying to determine the chemicals that make up the pheromone. They are working on identifying the specific isomers (structurally related chemicals) that the stink bugs may be releasing to attract other stink bugs to feeding sites. They are trying to identify the various combinations or ratios of attractant isomers that will produce an affordable and efficient lure, Khrimian says.

The mixture and components were also evaluated in field trials this summer in Beltsville, Kearneysville, and elsewhere. Don Weber, who is overseeing the Beltsville field studies, set up traps with the different candidate formulas and twice each week counted the numbers of male, female, and nymphal (immature) stink bugs they attracted. These pyramid traps, based on those designed by Leskey, are similar to those developed for weevils and pests of woody fruit. They have a screen funnel that allows the stink bugs entry, but inhibits exit. Lures with the experimental formulas hang alongside kill strips inside clear plastic containers.

A provisional patent application was filed, and the researchers hope to include results from the summer field trials in supplemental data that will be filed as part of the completed patent application.



Technician Brent Short counts the number of adult males and females and other life stages of brown marmorated stink bugs captured in traps baited with experimental lures. (D2708-6)

### Help From Genes and Natural Enemies

Dawn Gundersen-Rindal, research leader of the ARS Beltsville group, has been working with scientists at Baylor College of Medicine to sequence the stink bug’s genome. The sequencing is part of an international effort, known as the “i5K Project,” to sequence the genomes of 5,000 insects. Because it is such a nuisance to homeowners, a threat to agri-

culture, and rapidly spreading in the United States, the BMSB is one of the group’s top priorities, she said.

“Sequencing the genome will tell us about the genes that give this insect its defense mechanisms and its ability to respond to threats, such as pathogens that we might want to use against it. It might give us clues, for instance, how it may develop resistance to insecticides,” she says.

Separate from the sequencing project, Gundersen-Rindal is looking for genes that might be unique to the stink bug or make it vulnerable to specific treatments. “We hope we can find critical genes and use them against the stink bug by developing molecular biopesticides that address some weakness unique to its genetic makeup,” she says.



A female parasitoid wasp, *Trissolcus mitsukurii*, from Asia. This species is one of several parasitoids being evaluated as potential biocontrols of brown marmorated stink bug. (D2730-1)



## Focus on Pest Management (continued)



An adult parasitoid insect emerging from an egg of a stink bug. After a parasitoid female wasp lays an egg into a stink bug egg, the parasitoid offspring (one per egg) develops inside the egg, eating it from the inside out.

Another approach to reducing the population of BMSBs is classical biological control—using its natural enemies to help keep its populations in check. Hoelmer continues work he began at the Beneficial Insects Introduction Research Unit in Newark, Delaware, to find parasitoid insects that may lend a hand. Surveys conducted in the United States found that native stink bug parasitoids are not capable of controlling BMSBs, so it is important that more effective biological control agents from Asia be identified, tested, and eventually imported to the United States.

Hoelmer has collected some of these parasitoids during foreign exploration in collaboration with the USDA-ARS Sino-American Biological Control Laboratory, in Beijing,

China, and is now testing them in quarantine culture in Newark to determine their specificity for the BMSB.

Each of these research disciplines is needed to control BMSB populations in the United States, which will help farmers and homeowners alike. The project is an example of how USDA and ARS have the organization, infrastructure, and expertise to move quickly toward solving an emergent problem for agriculture.

*This research is part of Crop Protection and Quarantine (#304) and Methyl Bromide Alternatives (#308), two ARS national programs described at [www.nps.ars.usda.gov](http://www.nps.ars.usda.gov).*

*To reach scientists mentioned in this article, contact [Sharon Durham](mailto:Sharon.Durham@ARS.USDA.gov), USDA-ARS Information Staff, 5601 Sunnyside Ave., Beltsville, MD 20705-5129; (301) 504-1611.*

*("ARS Works Toward Control of Brown Marmorated Stink Bug" was published in the [January 2013](#) issue of Agricultural Research magazine.)*

### New App Helps You Name That Weed

**J**anuary 1, 2013, Columbia, Missouri. University of Missouri Extension has released a free app for

iPhones, iPads and Android devices to help people easily identify weeds in the field, lawn or garden.

Kevin Bradley, MU Extension weed scientist, unveiled the app at the MU Crop Management Conference, Dec. 19 in Columbia.

The app, called ID Weeds, has information on more than 400 plant species that could be encountered as weeds in crop fields, pastures, lawns, gardens or aquatic areas in Missouri and surrounding states, Bradley said.

ID Weeds lets users narrow the list of suspects with a series of drop-down boxes for various plant characteristics. Don't worry if you're not familiar with technical terms such as "ligules" or "spatulate." For most characteristics, users can click on "what's this?" to see an illustration.

Clicking on "Identify" will produce a list of weeds that match the characteristics you've chosen. The more characteristics you specify, the shorter the list will be.

Selecting a weed on the list brings up detailed information and one or more photographs.

You can also look up a weed by searching for its common or scientific name, or select from an alphabetical list, from "Alligatorweed" to "Yucca."

"Proper identification of weeds is important so that you choose an appropriate and cost-effective method of control," said Bradley, who is also an associate professor of plant sciences in the MU College of Agriculture, Food and Natural Resources.

The app was developed by James Meng, a programmer for MU Extension Technology and Computer Services (ETCS).

ID Weeds is compatible with iPhone, iPod Touch and iPad running iOS 5.1 or later, and devices running Android 2.2 or later.

To download:

- iPhone and other iOS devices: [itunes.apple.com/app/id-weeds](http://itunes.apple.com/app/id-weeds).
- Android: [play.google.com/store](http://play.google.com/store).
- A web version is available at [weedID.missouri.edu](http://weedID.missouri.edu).

(Source: University of Missouri Press Release. [extension.missouri.edu](http://extension.missouri.edu).)

## Focus on Pest Management (continued)

### Certification Program Fulfills an Essential Need for Competent Pesticide Applicators

Recently, an employee of an aerial application company was penalized for applying an agricultural pesticide without following all label directions and without the required applicator certification. In a separate case, a forest service company making an urban application was also fined for pesticide label violations and lack of certification.

Certain pesticide products must be applied by or under the direct supervision of specially trained and certified applicators. The most recent statistics indicate that there are 414,000 commercial and 481,000 private applicators certified in the United States.

Certification and training programs are conducted by states, territories and tribes in accordance with national standards. All certified applicators are trained in fundamental (core) principles of pesticide use - basic knowledge such as proper use of application equipment, potential application hazards, mixing instructions, protective clothing and equipment, applicable state and federal pesticide laws and regu-

lations, interpretation of pesticide labels, effective integrated pest management techniques and more. The National Association of State Departments of Agriculture Research Foundation (NASDARF) will begin revising the [current national core manual](#) later this year.

In addition to passing the core exam, certified commercial applicators (and in some cases certified private applicators) must pass one or more category certification exams. For example, aerial applicators might be required to pass one category exam in aerial methods and another in the specialty in which they will work, such as agricultural plants or aquatic areas.

The number of certification categories depends on the state. The diversity of categories shows that different expertise is needed for different kinds of pesticide use, such as agricultural plants, aerial, aquatic, food manufacturing and processing, forestry, fumigation, household, interior plantscaping, ornamentals, pet grooming, public health, rights-of-way, schools, seed treatment, sewer, turf, water sanitation and wood-destroying organisms.

Who needs to be certified to apply pesticides? The

answer varies by state. "In Virginia, with limited exceptions, any person who uses or supervises the use of any pesticide in exchange for compensation of any kind must be certified as a commercial applicator," says Liza Fleeson, program manager for the Office of Pesticide Services, Virginia Department of Agriculture and Consumer Services. "In addition, private applicators who apply [restricted use pesticides](#) for the purpose of producing an agricultural commodity, on property owned or leased by them or their employer, must be certified."

Certified applicators must understand their own state's certification and recertification requirements, as well as the types of certification (commercial, private, etc.) and certification categories available. If certified applicators apply pesticides in multiple states, they must know what other states, if any, recognize their state's certified applicator status for the specific category of use.

Here are a few examples of state-level certification and training requirements:

- New York certifies individuals as commercial pesticide applicators, private pesticide applicators and commercial pesticide

technicians. Commercial pesticide technicians apply restricted use pesticides under the supervision of a commercial applicator and, with additional training and/or experience, can become commercial pesticide applicators themselves.

- Some states require that certain pesticide businesses have their own registered technician training program. In Kansas, every pesticide business that applies pesticides to control wood-destroying, structural, ornamental, turf or interior landscape pests is required to have a registered technician training program for any uncertified applicators they employ. Some states require certification of everyone applying a pesticide (restricted or general use) in certain categories. For example, Wisconsin requires certification of anyone who applies or directs the use of pesticides in public schools, on school grounds or in aquatic environments.

More than 40 states post their lists of currently certified commercial and private applicators on the Web. Depending on the type and category of applicator, many states require additional training and/or recertification after a specified timeframe.

## Focus on Pest Management (continued)

Comprehensive training by the [Pesticide Safety Education Program](#) and other approved entities is essential prior to the initial certification and recertification of pesticide applicators by state regulatory agencies. "Proper pesticide use is continually impacted by new research, new products and new pest management best practices," Fleeson notes. "Pesticide safety education programs are integral to the ongoing competency of certified pesticide applicators and must be sufficiently funded and staffed."

If you have questions

about certification of applicators, contact your [State Pesticide Regulatory Agency](#) or [Cooperative Extension Service](#).

*This is the sixth in a series on pesticide stewardship sponsored by the Weed Science Society of America. Next month: Personal Protective Equipment.*

**Some Resources on Certified Applicators (always check your state's specific regulations):**

<http://www.epa.gov/oppfead/safety/applicators/applicators.htm> US Environmental Protection Agency  
<http://www.ksda.gov/>

[pesticides\\_fertilizer/content/170](http://pesticides.fertilizer/content/170) Kansas Department of Agriculture

<http://www.nj.gov/dep/enforcement/pcp/bpo-appcom.htm> New Jersey Department of Environmental Protection

<http://www.dec.ny.gov/permits/209.html> New York State Department of Environmental Conservation

<http://www.ncagr.gov/SPCAP/pesticides/license.htm> North Carolina Department of Agriculture and Consumer Services

<http://ag.utah.gov/divisions/plant/pesticide/applicators.html> Utah Department of Agriculture and Food

<http://www.vdacs.virginia.gov/pesticides/certification.shtml> Virginia Department of Agriculture and Consumer Services

<http://ipcm.wisc.edu/pat/certification> University of Wisconsin

### Operation FarmSafe 2013, Successful Farming Grant

*Apply for a Grant: Prevention pays for farmers who schedule routine safety maneuvers.*

**O**peration FarmSafe offers an opportunity to receive a free Certified Safe Farm (CSF) review, as well as a \$2,500 grant to make improvements indicated by the review.

The farm's CSF score is confidential, and there's no regulatory agency involved.

To apply, send a one-page application by April 30 with:

1. A brief description of your operation and family members working with you.
2. An explanation of how you and your family would benefit from a review/grant.

Nationwide Agribusiness Insurance is funding four grants. Recipients will be notified in mid-May and will need to make an appointment with a CSF reviewer to visit their farm in June. Specified work must be done by August 1, when a Successful Farming editor and photographer will visit.

#### Mail entries to:

Operation FarmSafe  
Successful Farming Magazine  
1716 Locust Street/LS257  
Des Moines, IA 50309-3023

Or enter online at: [agriculture.com/OperationFarmSafe](http://agriculture.com/OperationFarmSafe)





## Elderberry Production in Missouri *Patrick Byers, University of Missouri*

### Cultivars

Several elderberry cultivars are available commercially, including Adams 1, Adams 2, York, Nova, Scotia, Kent, and Johns. Of these, in our trials Adams 2 has consistently outperformed all others. Recommendations from other regions include all these cultivars. A large portion of the commercial fruit crop, especially in the Midwest, is harvested from wild plants. Two selections from the Midwest, Wyldewood and Bob Gordon, were released in 2010-11 and are available from several sources.

### Propagation

Elderberries are easy to propagate. Root cuttings (pencil diameter or slightly smaller, 4-6 inches long) may be dug in early March before growth begins. The cuttings are placed horizontally in a flat or pot, covered with .75 to 1 inch of a light soil or soilless medium, and kept warm and moist. Often a single root cutting will produce 2-3 plants. Dormant hardwood cuttings root easily. Collect 3-4 node cuttings before growth begins in the spring, and place the basal 2 nodes below the surface of a well-drained soil or medium. Be sure that the cutting wood is not cold damaged. A dip of the basal end of the cutting in



an IBA rooting powder may increase rooting. Sprouted hardwood cuttings and softwood cuttings are also easily rooted, provided provision is made to maintain high humidity around the cuttings until rooted. An intermittent mist system works well. A rooting hormone dip may be beneficial. Cuttings of 2-3 nodes root well. Remove a portion of the foliage from softwood cuttings (we usually leave only the 2 basal leaflets of each leaf). Softwood cuttings typically root well until about July 1; rooting percentage drops as the summer progresses.

### Establishment

Elderberries tolerate a range of soils, but do best in a moist, well-drained soil. Choose a site that is in full sun. Bare root 1 year plants dug from a nursery work well for planting establishment. Recently propagated con-

tainer-grown plants may be used to establish plantings during the same season. Plantings may be established from dormant cuttings stuck directly in



place in the orchard, but rooting percentage may vary. Berming may benefit plant performance. Plants are spaced 4 feet apart in the planting row, with 10-12 feet between rows.

### Pruning

American elderberries produce fruit on shoots older than one year, and

also produce suckers from the crown or root system which will bear fruit the first year. Plants may be pruned selectively, leaving a mix of young and older shoots. However, with many cultivars we have learned that the average size of panicles when shoots are renewed annually is significantly larger, suggesting that current season suckers produce larger though fewer panicles. Most of the panicles on these plants were harvested in two harvests, over a period of two weeks.

### Fertilization and irrigation

We apply nitrogen annually to the elderberry plantings. Mature plantings receive 60-80 pounds of nitrogen, applied at budbreak in late March – early April. We apply other nutrients every second year if needed based on a soil test (using blackberry

## Elderberry Production in Missouri (continued)

recommendations), using a complete fertilizer as the nitrogen source. Elderberries are not drought tolerant, and we irrigate the plantings during dry periods. We use trickle irrigation. The plantings are also mulched, to help conserve soil moisture.

### Elderberry pests

While elderberries are relatively pest resistant, we have noted several potential problems in our plantings. An unidentified stem borer causes wilting and dieback of new shoots in April and May. Japanese beetle adults feed on foliage. The adult elder borer, also known as the elderberry longhorned beetle, has been collected from plantings in Missouri. The larva of this beetle bores into the woody parts of the plant. Stink bugs are routinely noted on ripe panicles, but the amount of damage is unknown. A potentially damaging pest is the

eriophyid mite, present across Missouri. This mite causes cupping and crinkling of the foliage, and can cause abortion of florets and young fruit. The economic impact can be severe. Fall webworms were also noted in the Mount Vernon planting. An unidentified leaf spot disease, which usually is noted in midsummer, can cause premature leaf drop and occasionally defoliation. Birds of several species will feed on elderberry fruit; those selections with pendulous panicles appear to be less attractive to birds.

### Elderberry harvest, yields, and juice parameters

Elderberry harvest takes place in late July, August, and early September. Entire panicles are clipped and harvested when all berries are fully colored. The panicles on current season's shoots ripen later than panicles on older



wood. A bush with shoots of mixed age will ripen fruit over a 3 week period. We harvest plants at weekly intervals. Berries may be removed from the panicle by freezing the entire panicle and shaking off the fruit. The berries may be refrozen and processed as needed. Several studies suggest that average yields are around 1200 lb/acre in the first year and 8500 lb/acre in the second and succeeding years. We do not know how long a planting will remain productive; our oldest plantings have produced into year 7.

### Uses and markets for elderberry fruit and flowers

At present, most of the elderberries grown in the Midwest are harvested for processing markets. Several wineries produce elderberry wines from the fruit, and the flower panicles are used to flavor wines or drinks. Dried

blossoms are used in teas. Jelly and jam are produced from elderberry juice or blends of elderberry and other fruits. Elderberries contain high levels of antioxidants, and elderberry juice and concentrate are marketed as nutraceuticals. The pigments in elderberry juice are suitable for colorant use. Fresh or dried fruit are used in baking and energy bars.

*Reprinted from: [Proceedings of the 2011 New England Vegetable and Fruit Conference, December 13-15, 2011](#). Additional information on elderberry, including yields, juice qualities, and results of research projects, is available from the author.*



## Calling 911 for Help in An Emergency Situation

Sharon Scofield, Jim Carrabba, and Anna Meyerhoff, the New York Center for Agricultural Medicine & Health – NYCAMH

If an emergency occurred at your farm would everyone at the farm know how to call for help? Would everyone at your farm know how to make a 911 call? Does everyone at your farm know how to tell the 911 dispatcher how Emergency Medical Service (EMS) responders can reach your farm location or any location at your farm? In an emergency, it is vitally important to call 911 as soon as possible. The sooner that EMS arrives on the scene, the better the chance of survival for the victim(s). When a 911 call is made, the dispatcher will ask for information from the caller. This information is important to the EMS responders so that they are fully prepared to deal with the situation when they arrive.



### When you call 911, you will be asked the following information:

- ◆ Your name and the telephone number you are calling from
- ◆ The number and condition of the victim(s)
- ◆ Information on the nature of the emergency
- ◆ Any care that has been rendered to the victim(s)
- ◆ Special conditions that will hinder rescue efforts such as overturned machinery, entanglements, downed power lines, fire, chemical spill, animals present, etc.
- ◆ Specific instructions on how to get to the victim. When giving directions to the 911 Dispatcher include the following: 911 Address, Road names, Specific mileage, Visible landmarks. The victim may be in a remote location on the farm or in a confined space.
- ◆ • Who, if anybody, will meet and direct EMS to your location **Important:** When making the 911 call, never hang up until told to do so by the dispatcher.

**Note:** Using your cell phone may not ensure being located by a 911 dispatcher. Older models may not have the GPS feature. You may not have cell phone service in the area you are located. Certain weather conditions may interfere with satellite reception.

### Use these preventative measures when working alone to alert your family and co-workers of potential emergencies:

- ◆ Advise someone where you will be and how long you will be there.
- ◆ Co-workers or other family members should periodically check on individuals who are working in remote locations for long periods of time.
- ◆ Carry a cell phone or two-way radio.
- ◆ Show family members, workers and visitors where the directions to the farm and emergency telephone numbers are posted.
- ◆ Emergency telephone numbers and directions to the farm should be posted prominently near all landline telephones. This information could also be printed on a wallet sized card that employees and/or family members could carry with them if cell phones are used on your farm. Have this information posted in Spanish, if necessary.

**Note:** This information was prepared with the assistance of the Oneida County 911 Dispatchers.

NYCAMH offers on-farm safety surveys and worker safety trainings at no cost to farm owners. We offer bilingual trainings and materials for Spanish speaking workers. If you want more information on these services, or information on farm emergency response, please call 800-343-7527, or e-mail us [jcarrabba@nycamh.com](mailto:jcarrabba@nycamh.com) or [ameyerhoff@nycamh.com](mailto:ameyerhoff@nycamh.com). NYCAMH, a program of Bassett Healthcare Network, is enhancing agricultural and rural health by preventing and treating occupational injury and illness.





Department of Horticulture-Geneva Campus  
 NYSAES  
 630 West North Street  
 Geneva, NY 14456

Phone: 315-787-2367  
 Fax: 315-787-2389  
 E-mail: [mcm4@cornell.edu](mailto:mcm4@cornell.edu)



New York Berry News is a monthly commercial berry production newsletter provided by Cornell Berry Team members.

**Questions or comments about the New York Berry News?**

Ms. Cathy Heidenreich  
 Cornell University Dept. of Horticulture – Geneva Campus  
 630 W. North Street, Geneva, NY 14456  
 315-787-2367  
[mcm4@cornell.edu](mailto:mcm4@cornell.edu)

*Editor's Note: We are happy to have you reprint from the NY Berry News. Please cite the source when reprinting. In addition, we request you send a courtesy e-mail indicating the NYBN volume, issue, and title, and reference citation for the reprint. Thank you.*

**Berry Grower Volunteers Needed for Farm Business Summary Project**  
*(continued from page 1)*

Early in the process, growers often make changes that immediately improve their bottom line. Participating growers also learn which components of their operation should be expanded or contracted to improve return on investment (ROI). Participating berry growers should reap the same rewards as their tree-fruit colleagues.

During Stage 2 of the project educators will hold half-day regional berry crop economics workshops using the information and resources generated from Stage 1 to assist additional berry growers in evaluating their ROI.

**How do I get involved?**

You may be contacted in the future by an educator in your region and asked to consider being a participant. To volunteer now or to receive more information please contact the project team member closest to you.

Educator	Region (home base)	Contact
Sharon Bachman	Western NY (Erie County)	<a href="mailto:sin2@cornell.edu">sin2@cornell.edu</a> 716-652-5400 ext. 150
Sandy Buxton	Eastern/Northern NY (Washington County)	<a href="mailto:sab22@cornell.edu">sab22@cornell.edu</a> 518-746-2560
Ginny Carlberg	Western NY (Chautauqua County)	<a href="mailto:vec22@cornell.edu">vec22@cornell.edu</a> 716-664-9502 ext 202
Jim O'Connell	Eastern/Southern NY (Ulster County)	<a href="mailto:jm098@cornell.edu">jm098@cornell.edu</a> 845-691-7117
Alison De Marree	Lake Ontario Region (Wayne County)	<a href="mailto:amd15@cornell.edu">amd15@cornell.edu</a> 315-573-8881
Matt LeRoux	South Central Region (Tompkins County)	<a href="mailto:mnl28@cornell.edu">mnl28@cornell.edu</a> 607-272-2292
Stephanie Mehlenbacher	Finger Lakes Region (Steuben County)	<a href="mailto:sms64@cornell.edu">sms64@cornell.edu</a> 607-664-2300
Dan Welch	Central NY (Onondaga County)	<a href="mailto:dlw56@cornell.edu">dlw56@cornell.edu</a> 607-255-7103