

EXECUTIVE DEAN  
OF AGRICULTURE AND NATURAL RESOURCES

Report to the New Jersey State Board of Agriculture  
July 2011

### *NJAES Update on Brown Marmorated Stink Bug*

The brown marmorated stink bug (BMSB) continues to be a problem for both growers and homeowners alike. As in 2010, growers in New Jersey and the Mid-Atlantic States this year are experiencing harmful populations of BMSB, with damage already evident in crops such as tomatoes, peaches, and apples. Causing greater alarm among farmers and scientists alike, BMSB has been able to feed and reproduce on several new crops, including wheat, eggplant, and melons, adding to the list of agricultural commodities potentially affected by this pest.



Brown marmorated stink bug on brown rot-infected fruit

To combat the growing threat, researchers from the **New Jersey Agricultural Experiment Station (NJAES)** have been actively involved in the field, testing several conventional and newer insecticide regimes in peppers and tree fruit to find a short-term solution for these crops. Researchers are also involved in studies on different cultivars with innate resistance to the stink bug, and are investigating better monitoring methods as well as potential biological control agents. This research is supported by Hatch, multistate funds, and by several USDA grants, listed below.

NJAES scientists and agents have also helped to form a regional working group that meets twice a year to discuss progress towards the management of BMSB and to establish or modify regional research priorities.

On June 13, at the request of the New Jersey Farm Bureau, **George Hamilton** (extension specialist in entomology; chair, Department of Entomology), **Dean Polk** (statewide fruit IPM), and Gary Mount, owner of Terhune Orchards, testified in front of the New Jersey Assembly Agriculture and Natural Resources Committee on the impact of the BMSB on New Jersey. Read the news story [here](#).

#### List of Grants to Investigate BMSB

*NE IPM Center*. 2004-2008. Funds to monitor the spread of the brown marmorated stink bug. \$15,000.

*USDA AFRI Critical Issues*. 2010. Development of management tactics in tree fruit, vegetables, and soybeans. \$90,000 multistate grant with Rutgers as the lead.

*USDA IR-4*. 2011. Insecticide efficacy trials in peaches and apples. \$10,000.

*USDA IR-4*. 2011-2012. Development of an "attract and kill" system in peaches. \$19,700.

*USDA Northeast Regional IPM*. 2011-2012. Development of management tactics in peppers. \$135,272 multistate grant with Rutgers as the lead.

*USDA AFRI Specialty Crops Research Initiative*. 2011-2013. Development of monitoring and management strategies in field crops, nursery, small fruit, tree fruit, and vegetables. \$9.6M multistate/institution grant with NJAES's share being \$250,000 per year for three years.



## Spotlight

### Exploring the Market Potential of Ethnic Vegetables

Fresh fruit and vegetable consumption has been on a steady decline but a wave of health conscious consumers and the growing "eat local" movement have provided some measure of optimism. In certain states like New Jersey, another wave of consumers of fresh produce is immigrants who bring their traditional cultural food preferences to their new homeland. While this growing segment of the population creates higher demand for fresh produce, it is largely an uncharted market for growers.

Today, approximately one-third of New Jersey's population has a foreign-born background and actively seeks food crops not commonly found in U.S. grocery stores. Much of this ethnic produce is sourced from importers and selections may be small or not very fresh, especially for highly perishable items. Sometimes, preferred produce is not at all available and immigrants either substitute a conventional item or go without the item and change their cuisine accordingly.

While a potentially lucrative market, the questions for farmers are many. For the various immigrant groups, what are their produce preferences and are there some items that span various cultures, such as cilantro, which is used in Asian, Hispanic and other cuisines? How do they like them grown and bundled and how do they prepare and use them? Where are the markets for these items? What varieties do well under local growing conditions?



**Ramu Govindasamy** examining pepper plant trials at the Rutgers Gardens

For the individual farmer, researching this information would be overwhelming—enough to provide a barrier to entering this market. Several Rutgers New Jersey Agricultural Experiment Station research and extension faculty have undertaken a number of ethnic crops research projects to help answer some of these questions.

Under one such project, **Ramu Govindasamy** (professor and marketing specialist within the Department of Agricultural, Food and Resource Economics - DAFRE), along with Rutgers colleagues, cooperated with the universities of Pennsylvania, Massachusetts and Florida in a multi-faceted study to document and quantify the ethnic produce market to identify opportunities for farmers to grow crops targeted to this population.

The specific ethnic market subjects of study were the Asian and Hispanic segments, chosen for their strong recent growth and continued growth expectations. The top two sub-groups within each of these segments were chosen for the study; Chinese and Asian Indian and Puerto Rican and Mexican. A 2006 consumer survey of the total ethnic produce market on the East Coast was estimated at more than \$1 billion for all four ethnic sub-groups combined.

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Ethnic vegetables have been the focus of various field and research trials conducted by Rutgers faculty members **James Simon** (director, New Use Agriculture and Natural Plant Products Program); **Brian Schilling** (assistant extension specialist, DAFRE; associate director, Food Policy Institute); **Albert Ayeni** (instructor, Plant Biology and Pathology); **Venkat Puduri** (research associate, DAFRE) as well as several agricultural and resource management agents, including **William Sciarappa** (Monmouth County); **Richard Van Vranken** (Atlantic County); **Peter Nitzsche** (Morris County); and **Stephen Komar** (Sussex County).



Habanero pepper trials at Rutgers Agricultural Research and Extension Center in Upper Deerfield

There is compelling evidence to encourage New Jersey farmers to take the plunge, says Govindasamy. "In the Eastern United States, stakeholders agree there is an urgent need to make farming more profitable to reduce the decline in the number of farmers and farmland acreage. New Jersey's vegetable marketing structure was reviewed by a team of national experts, who concluded that the economic decline of the state's vegetable industry is imminent without a significant change in marketing strategies."

The findings of the various Rutgers NJAES specialty crops research projects reveal that New Jersey's climate is favorable for growing and marketing ethnic crops and have already begun to show small, but growing, dividends for

New Jersey farmers. A glimpse at the bounty from our New Jersey farms already indicates that change is underway as evidenced by the array of exotic greens, squashes, exotic eggplants, and hot peppers that accompany our traditional staples of corn, tomatoes, sweet peppers, and cucumbers.

## *Faculty and Staff Activities and Accomplishments*

### **Celebrating New Jersey's Animal: the Horse**

On June 10, Rutgers Equine Science Center Director **Karyn Malinowski** joined New Jersey



Secretary of Agriculture Douglas H. Fisher to officially kick-off the Month of the Horse in New Jersey at the Standardbred Retirement Foundation (SRF) in Hamilton, NJ. Malinowski, Fisher, and other officials discussed the importance of having a thriving equine industry in New Jersey. Fisher also unveiled planned events throughout the state celebrating the Month of the Horse.

Pictured L-R: **Karyn Malinowski**, Judith Bokman, founding director of the SRF, and Douglas H. Fisher during the Month of the Horse kick-off event

## Outreach Efforts: Public/Community Service

### Community Garden Launched at New Brunswick Farmers Market



The **New Brunswick Community Farmers Market (NBCFM)**, which was launched in July 2009, is operated by the **New Jersey Agricultural Experiment Station**, thanks to a generous grant from Johnson and Johnson and with the support of the city of New Brunswick. The market seeks to develop a sustainable community by bringing healthy food from local farms to families and households across the city of New Brunswick. It offers a convenient venue for **Rutgers Cooperative Extension (RCE)** education and outreach on a variety of topics, especially those related to food, nutrition, and health.

To build on its commitment to expanding RCE outreach in food, nutrition, and health programming, the farmers market launched a Youth and Family Gardeners Program. This new program would allow the Farmers Market to expand by involving various community organizations like the **4-H Eco-team**, The Girl Scouts of New Brunswick, New Jersey after 3, which is dedicating to expanding opportunities for afterschool kids, and other organizations.



Kids from the Girl Scout Troop in New Brunswick at the launch of the garden

According to **Jaymie Santiago** (program coordinator, Rutgers Cooperative Extension; NBCFM manager), "We envision a program that can be a year-round educational tool and would teach the community about the nutritional benefits of vegetables, various techniques on how to grow vegetables, and remove any inhibitions to growing vegetables on their own."

"The food harvested from the community garden goes to the families of the children while the food harvested from our Rutgers Against Hunger "giving garden" will go to soup kitchens. Moreover, the herbs are being harvested by the Eco-team weekly and sold at the Farmers Market in an attempt to teach entrepreneurship. While this hybrid community garden can serve as a great educational



tool, it can also allow for a connection with the community and family members' cultural heritage," added Santiago.

The program got underway in June this year, a bit later than anticipated, said Santiago, due to the fact that the gardens had to be built from scratch. The soil had to be tested; lumber had to be treated and then cut; soil, compost, and mulch had to be mixed and distributed; and it all was done through the efforts of

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various community volunteers. The 4-H Eco-team planted the herb garden and the Girl Scouts Troop assisted in planting the beneficial border along the side of the gardens to attract pollinators and beneficial insects.

Santiago indicates that more exciting plans are underway with the design of a small sensory garden that would serve as another teaching tool for youth groups and their families. Blueberry bushes were donated by **Peter Oudemans** (associate professor, Plant Biology and Pathology) and the **Philip E. Marucci Center for Blueberry and Cranberry Research and Extension**, an NJAES extension farm located in Chatsworth, NJ.

### *Mark Your Calendars!*

County Fairs are held across the state of New Jersey during the months of July and August. For summer fun and excitement at the perennial **4-H event**, take part in a County Fair near you!

#### Schedule of Remaining New Jersey 4-H County Fairs

County	Date
<a href="#">Atlantic County 4-H Fair</a>	August 11 - August 13
Bergen County 4-H and Master Gardener's Fair	August 6 - August 7
<a href="#">Camden County 4-H Fair</a>	August 5 - August 7
<a href="#">Gloucester County 4-H Fair and New Jersey Peach Festival</a>	July 28 - July 31
<a href="#">Hunterdon County 4-H &amp; Ag. Fair</a>	August 24 - August 28
<a href="#">Mercer County 4-H Fair</a>	July 30 - July 31
<a href="#">Middlesex County Fair</a>	August 1 - August 7
<a href="#">Monmouth County Fair</a>	July 27 - July 31
<a href="#">Salem County Fair</a>	August 9 - August 12
<a href="#">Somerset County 4-H Fair</a>	August 10 - August 12
<a href="#">Sussex County Farm &amp; Horse Show/New Jersey State Fair</a>	August 5 - August 14
<a href="#">Warren County Farmers' Fair</a>	July 31 - August 6

This report is produced by the Office of Communications and is available online at <http://execdeanagriculture.rutgers.edu/boa/>.

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