



## Rutgers Cooperative Extension 2014 Annual Conference Celebrates 100th Anniversary of Smith-Lever Act



The **2014 Rutgers Cooperative Extension (RCE)** Annual Conference convened on October 20 in the Cook Student Center. With **223 in attendance**, this has been one of the largest RCE conferences to date, with SNAP-Ed/EFNEP members in attendance and the Office of Continuing Professional Education (OCPE) joining the fold.

For 2014, the conference incorporated special activities to mark the **100th anniversary of the signing of the Smith-Lever Act** of 1914, which officially created the national Cooperative Extension System. Rachel Lyons, interim chair of the Department of 4-H Youth Development, served as presenter for the conference.

**Executive Dean Bob Goodman** opened the session with welcoming remarks, reflecting that for the past 100 years, while RCE has held up its end of the bargain, what has been built has been taken for granted in this era of decreased funding for Cooperative Extension. The traditional model of public funding has changed and today there is more reliance on entrepreneurship, grant funding, and philanthropy. Goodman cited online education and fees for service as examples of reconfiguring what we do and how it is paid for. From Goodman's observations of Extension programs throughout the U.S., he contends that Rutgers Cooperative Extension represents one of the most robust programs in the country.

A special demonstration of instant feedback for pro-

grams was conducted by **Bill Sciarappa, agricultural agent for Monmouth County**. Using clickers with number buttons, attendees were able to register their responses to a series of questions on demographics that Sciarappa posed to the group. The results were immediately registered and projected on the screen as graphs. The results showed that most attendees represented SNAP-Ed and worked between 1 – 5 years at Extension. The majority of people worked in New Brunswick and were between 50 – 59 years old. Most had a Master's level of education and had teaching experience with adult clients. For the skill area most needing self-improvement, the majority cited time management. The primary means that attendees reported for digital communications was e-mail, with a website coming in second.

The **keynote speaker** for the conference was **Denise Dennis, Professor at Bloomfield College**. Dennis spoke on "**Managing Four Generations**" with regards to workplaces like Extension that employ a wide age-range of workers. Dennis defined the four generations as "Mature," born 1927-1945 (respects authority); "Baby Boomer," born 1946 – 1964 (workaholic mentality); "Generation X," born 1965 – 1979 (adapts well to change); and "Millennial," who were born after 1980 (technological gurus). Each of these generations brings varied perspectives in the workplace.

## Fending Off Disease with a Fork: Rutgers Scarlet Lettuce

Modern science is catching up with ancient wisdom. The expression “*Let food be thy medicine and medicine be thy food*” has been attributed to Hippocrates, father of medicine, around 431 B.C. Hippocrates’ adage is aptly illustrated by a glance down a supermarket produce aisle with its colorful display of deep red strawberries, fiery orange carrots, bright green broccoli and brilliant blueberries. The vibrant hues found in plant pigments that create these distinct colors have aroused the interest of the scientific community as vast amounts of research uncovers beneficial effects these “**phytonutrients**” have on preventing disease and maintaining health.

While blueberry is the current King Superfood, its availability is limited by growing season, or they are priced at a premium, and blueberries are high in sugar, requiring limited consumption for people on restrictive diets.

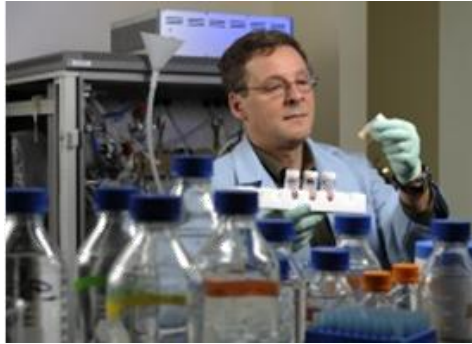
Is it possible for another commonly available fruit or vegetable to rival the high polyphenol content of blueberries? **Rutgers Distinguished Professor** in Plant Biology **Ilya Raskin** has selected lettuce, one of the most widely consumed and affordable vegetables and readily available year round in the U.S. to boost its polyphenol content. Using red leaf lettuce, Raskin’s laboratory selected samples with the highest polyphenols. From there, using a non-transgenic process of **tissue culture**, Raskin developed a deep burgundy red lettuce that has elevated levels of polyphenols – two to three times of blueberries.

The high polyphenol lettuce has been named **Rutgers Scarlet Lettuce (RSL)** – a tribute to Rutgers’ school mascot and color, the Rutgers Scarlet Knights. RSL also has a low glycemic index, preventing spikes in blood sugar that foods high in carbohydrates or sugars, such as fruits and berries, can cause.

With its exceptionally high profile of phytonutrients in addition to the regular benefits of lettuce of vitamins, minerals, low calorie and high fiber, RSL is the first lettuce worthy of superfood status. “Lettuce is one of the

most widely consumed vegetables after potatoes,” said Raskin. “**This adds functionality to something that is not known for being good or bad.**”

To introduce RSL to the market, Rutgers has patented and licensed RSL to **Nutrasorb LLC, a Rutgers spin-off** company that specializes in enhancing phytoactive compounds in foods. Nutrasorb has granted a license to [Shamrock Seeds](#) as the exclusive seed dealer for RSL. Shamrock specializes in vegetable seed for commercial growers in the major salad growing regions in the U.S. and anticipates interest from growers throughout the U.S. **RSL seed is available** to large and



medium size farms — there is a minimum purchase requirement — which must sign an agreement to use the licensed product. Commercial growers can obtain the RSL seed for growing as loose leaf lettuce or baby greens.

The first company to launch this product will be **Coastline Family Farms**, a major produce shipping company based in Salinas, CA. Coastline has selected and **trademarked the name Nutraleaf™** for the brand and will be the exclusive grower/shipper of **whole head and artisan-pack Nutraleaf™** Burgundy Leaf Lettuce and Nutraleaf™ Burgundy Romaine for distribution throughout North and South America.

Despite it being packed with nutrients, consumers will want to know – does the lettuce taste good? Registered dietician Sharon Palmer, author of *The Plant-Powered Diet*, sampled Coastline’s Nutraleaf™ product. Palmer comments in a post on NutraLeaf™ in her blog, “It’s not only packed in antioxidants, vitamins and minerals, but this lettuce is tender and delicious, too. In fact, lettuce is one of America’s favorite vegetables, so I love the idea of getting more nutrients into your daily salad.” Palmer adds, “Maybe the best thing about NutraLeaf is just how beautiful it looks in salads, serving as a deep purple color contrast for a number of your favorite salad ingredients.”



## Happy Birthday Double Poly !



In the early 1960's, **Rutgers University Professor William J. Roberts** fastened two polyethylene sheets together, mounted them on a simple wooden frame and proceeded to inflate the space between the sheets with a low-pressure fan. His simple structure was the first **air-inflated double layer polyethylene greenhouse**, known simply and universally today as **double poly**. It would start a **revolution in greenhouse engineering**.

Robert's idea spread quickly, across the United States and then throughout the world. Commercially, low-cost, easy to install, energy efficient system was readily accepted. The first air inflated double – poly concept would also spur further research that would eventually lead to the invention of other milestone greenhouse products. This year, 2014, marks the **50<sup>th</sup> anniversary of Roberts monumental achievement**.

### A Solution Created Out of Necessity

Early on, Roberts recognized the importance of a double-layer covering to reduce the condensation drip that plagued growers using single - layer greenhouses. He was also cognizant of growers' early struggles to install double layers, an unwieldy procedure that involved attaching one layer to a rafter, adding a 2 x 2 spacer and then attaching another layer. The process was costly, time-consuming and not always effective.

The double-poly system significantly reduced the labor and materials required for installation, thus bringing down costs. Additionally, the inflation of the two layers reduced the pressure on the film, which in turn minimized tearing and strengthened the entire structure. The insulated air space also reduced heating requirements.

**David Mears, also a professor at Rutgers University**, worked closely with Roberts on some of the early research associated with film stress and structural loads. Other research efforts at Rutgers University led to the development of movable insulation/shade curtains and various in-floor heating systems.

The first commercial greenhouse to use the double poly was located at **Kube-Pak Inc. in Allentown, N.J.** Co-Owner, Aart Van Wingerden, was one of the early leaders in the development of frame structures for multi-

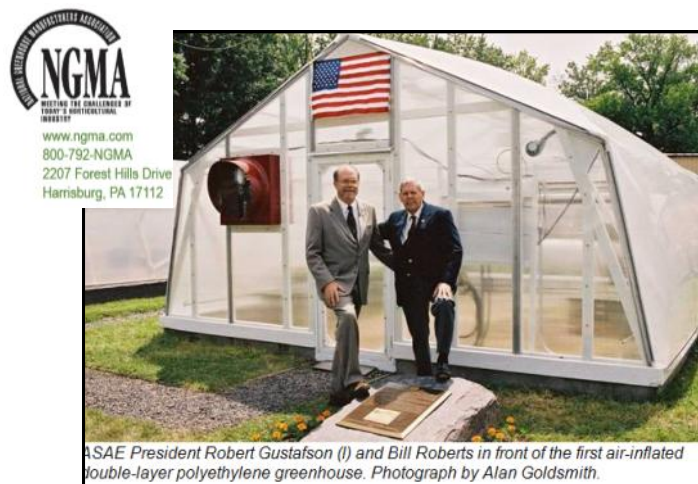
span and single-span structures, along with **Kenneth Bryfogle**, owner of **Power Plants Inc.** **Frank Stuppy**, owner of **Stuppy Floral Inc.** was also a major player with his contribution of the first extruded aluminum film fastener.

### Lasting Impact Still today

Roberts' original air-inflated double-layer poly greenhouse still stands today, relatively unchanged except for a few minor upgrades, on the Rutgers University Cook College campus in New Brunswick, N.J. In 2004, the **Society for Engineering in Agricultural, Food and Biological Systems (ASAE)** dedicated the site as a historical landmark in recognition of Roberts' achievement and the impact these structures have had on the plant industry.

The original double poly system not only led to the development of ground-breaking greenhouse products, it also paved the way for new growth in the industry. Small businesses, farms and garden centers suddenly found it more affordable to expand their operations with the addition of new greenhouses. In developing countries, these structures have allowed growers to support their families and produce affordable food for their communities year-round. Today, Roberts' accomplishment still has a lasting impact on the industry - more than half of the plastic greenhouses in use worldwide utilize the air-inflated double-poly system.

*Thanks to National Greenhouse Manufacturers Assoc. For use of this article. Source: ASAE Historic Landmark Dedication.*



ASAE President Robert Gustafson (l) and Bill Roberts in front of the first air-inflated double-layer polyethylene greenhouse. Photograph by Alan Goldsmith.

## Agent's Overview

After a wonderful **American Holiday of Thanksgiving**, we are especially thankful for the rich and nutritious produce from our farms provided by the farmers who work so hard in production. In this celebratory issue, we can also see examples of both past and present contributions of our Rutgers Land Grant institution for commercial agriculture. We are also grateful for two recent **American Government policy decisions** which very positively affect agriculture.

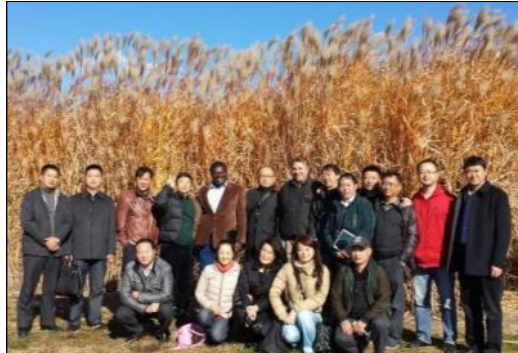
- 1 **The Immigration Bill** that will allow 5 million Hispanic workers to remain working in the U.S. along with their American born families. We all know their long-term and essential service to food production throughout our country. This will help sustain our farm productivity over the years.
- 2 **The USA-China Agreement** to reduce fossil fuel burning and CO2 emissions. Diplomat John Kerry successfully negotiated what everyone believed was impossible - getting the world's two worst air polluters to dramatically reduce emissions from fossil fuels. This legal contract calls for a 28% petrochemical reduction from America and 20% from China within 16 years. Bear in mind that the Chinese promise of 20% reduction is equivalent to the entire pollution problem in America. The Presidents of both countries realize this important effect on climate change and human health. They have committed to substitute alternative energy sources like solar, wind, geothermal and bio-energy crops. Yes, let's move forward with more switchgrass, miscanthus, jatropha and algal production.

Coincidentally, our Monmouth County office hosted an influential group of Chinese administrators and scientists for agriculture. See the article below and how we were able to demonstrate to the group how bioenergy crops like miscanthus could substitute for their dependence on coal burning technologies that have seriously affected their human and environmental health

So we have even more to be grateful for as our world changes.

*Bill Sciarappa*

## Chinese Delegation Tours Rutgers



RU-SEBS-NJAES hosted a Chinese delegation of 15 high-level agricultural administrators and scientists. The group led by **Dr. Albert Ayeni** toured the main New Brunswick campus, **RAREC** in Deerfield, **RCE Earth Center** in Middlesex and the **Rutgers Eco-complex** in Bordentown. RCE educators **Hlubik, Sciarappa, and Specca** explained the roles of NJAES and Cooperative Extension and outreaching applied University research. Monmouth County Extension gave overviews of 4-H Youth Development, Family and Community Health Sciences and the Master Gardener / Horticultural program. Agent Sciarappa provided

results of Chinese Ethnic Crop Studies from the Rutgers NRI and SCRI-USDA Programs. The Staff provided local foods as cranberries, blueberries, apple cider, and vegetables with an emphasis on nutrition and health. The visitors were impressed with the field tour of community and school gardens. This was followed by a tour of the **Plant Science farm in Adelphia** demonstrating tree-nut culture and bio-energy crop production. The 15 foot tall **Miscanthus grass** plots coincided perfectly with the historic signing of an energy policy between China and the USA to reduce fossil fuels by replacement with solar, wind, geothermal and bio-energy crops.

# FFA 2014 CAREER DEVELOPMENT EVENT - Vivian Quinn & Sabrina Brown



School	Fruit-Veg	Dairy	Turf	Combined Land/Homesite
Allentown HS	1 <sup>st</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
N. Burlington HS	3 <sup>rd</sup>	13 <sup>th</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Mon. County Voc	4 <sup>th</sup>		1 <sup>st</sup>	
Freehold Twp HS	5 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>
N. Burlington Middle	12 <sup>th</sup>			

The 2014 FFA Career Development Event was held at Douglas Campus Center, Trays Hall, which was a new location this year. This was the **14th year that Rutgers Cooperative Extension of Monmouth County** coordinated the Fruit and Vegetable ID and Judging event, which had **40 high schools** and middle schools in attendance with 84 students competing. Delicious Orchards once again graciously donated the produce necessary for the competition. Their generosity year after year is commendable.

This year a written multiple choice exam was piloted with the hope that it will be adopted as part of the event in 2015. Topics included consumer awareness, food safety, proper storage, plant production and harvest, nutrition, etc. The students seemed to enjoy the extra challenge of the exam. **Allentown High School was awarded 1st place** in a tie-breaker against Warren Hills Region High School because they won the judging portion over Warren.

Congratulations to Central Jersey FFA's for top placement in all Career Development Events for 2014.

Results from the event can be found at <https://www.judgingcard.com/Results/Events.aspx?ID=4067>

## Entrepreneurship Agriculture Day 2014 – Another Success!

On October 18, Rutgers School of Environmental and Biological Sciences (SEBS) celebrated its second **Entrepreneurship Agriculture (EA) Day on Cook Campus**. This event was part of the Entrepreneurship Ag Program initiated at SEBS in Spring 2013 and comprised the teaching of a Jr/Sr Colloquium on Entrepreneurial Agriculture, a competitive student internship on Entrepreneurship Agriculture.



EA Day interns and faculty team members (l-r): Serpil Guran and Dave Specca from Rutgers EcoComplex; Roslyn Dvorin; Ian R. MacCloud; Tatiana Gladney; Kasturi Pryanka Shanker; Donna Schaffner, Rutgers Food Innovation Center – South; Sabedo Argueta; Albert Ayeni; Christopher Satch; Xenia Morin, SEBS Office of Grants Facilitation; Tung Ching Lee, Department of Food Science; and Bill Sciarappa

The key events included **poster and oral presentations** by EA interns Sabedo Argueta (Environmental and Business Economics 2014), Roslyn Dvorin (Ecology, Evolution & Natural Resources 2015), Tatiana Gladney (Agriculture and Food Systems 2016), Ian R. MacCloud (Plant Science 2015), Christopher Satch

(Grad Student, Plant Pathology) and Kasturi Pryanka Shanker (Biotechnology 2014); and a **keynote speech by Theresa Viggiano and Patrick Leger, founders and chief executives, First-Field, Inc.**

## Master Gardeners graduates 27 new members

Twenty-seven men and women became certified Rutgers Master Gardeners at a graduation ceremony on November 20, at **Jumping Brook Country Club**. The Master Gardeners are now certified gardening experts because they have completed a course of classroom and hands-on training in plant biology, propagation, soil science and disease and pest control. The trainees then began sharing their knowledge with others by conducting garden lectures, demonstrations, school and community gardening projects, and answering calls on the County's "**Horticulture Helpline.**"

"This year's Master Gardeners group has proven to be an exceptional class," **Freeholder Director Lillian Burry** said. "Half of the graduates have logged 100 hours of service, showing dedication to passion for the program."

"**This Master Gardener class worked with the best in the horticultural field** – faculty from Rutgers University and Brookdale Community College and professional staff at the Monmouth County Park System and Cooperative Extension while completing their training," **said Bill Sciarappa, Agricultural and Resource Management Agent** for Monmouth County's Rutgers Extension Office.

**Diane Larson, County Horticulturist and the Rutgers Master Gardener Coordinator**, also gave out awards for certified Master Gardeners who have volunteered 100, 250, 500, 1000, 1500, 2000, 3000, 5000, and 8000 hours to the program. She spoke about the 'Plant a Row for the Hungry' garden that the new class worked in, located



*L to R: Gwendolyn Wisely, Diane Larson, Freeholder Lillian Burry, Judy Lipman, Veronica Gallagher, Linda Lichardi, Beth Hutter*

behind the Agriculture Building. Over 900 hours were spent in the garden, which yielded **2500 pounds of food** that was **donated to five different** county food pantries .

The Master Gardener program, conducted throughout the United States and Canada, is a two-part educational effort in which avid gardeners are provided many hours of intense home horticulture training. In return, they "**pay back**" local extension through volunteerism.

In New Jersey, the program is a cooperative effort of Rutgers University, the U.S. Department of Agriculture and the county Boards of Chosen Freeholders. Monmouth County's program involves the county office of Rutgers Cooperative Extension, **Brookdale Community College and the county Park System.**

*Diane Larson*

## Happy Holidays from RCE Monmouth County



## CALENDAR

### January 2015

**5, 6, 7 - Northeast American Society of Horticultural Scientists**, University of Delaware, Nick Polanin  
908-526-6293 X 4.

**13, 14 & 15 - Integrated Pest Management** - Rutgers Cont. Ed. 9 am—4 pm. Info 732-932-9271 or visit; [www.cpe.rutgers.edu](http://www.cpe.rutgers.edu)

**24-25 NOFA-NJ 25th Anniversary Winter Conf.** Brookdale Community College. [www.nofa.org](http://www.nofa.org)

**22 Pepper Advisory Council** - RAREC - 856-455-3100.

**20-22 - Empire State Fruit & Vegetable Expo** - Syracuse, NY. J. Marvin [nysvga@twcny.rr.com](mailto:nysvga@twcny.rr.com)

**17 - Pesticide Calibration** - Rutgers Cont Ed. 8 am - noon. Info 732-932-9271 or visit; [www.cpe.rutgers.edu](http://www.cpe.rutgers.edu)

**27-29 - Mid-Atlantic Fruit & Veg Conv.** - Hershey, PA visit: [www.mafvc.org](http://www.mafvc.org)

### February 2015

**3-5 - NJ Agricultural Convention & Trade Show** - Tropicana, Atlantic City, NJ - 800-345-8767 Code HAGR115.

**27 - Central Jersey Vegetable Association Meeting** - RCE Monmouth County - Joanne or Dorey 732-431-7260 X7280

### March 2015

**4 - Introduction to Food Safety & Third Party Audits for Beginners** - Monmouth County Coop. Ext. 4000 Kozloski Road, Freehold, NJ. 856-451-2800 x1

*Changing Times is produced and edited by Bill Sciarappa and Vivian Quinn  
sciarappa@njaes.rutgers.edu  
<http://www.visitmonmouth.com/page.aspx?id=3078>*

*Newsletter printed courtesy of the  
Monmouth County Board of Chosen Freeholders*



## 2015 New Jersey Agricultural Convention & Trade Show

**February 3, 4, 5, 2015**

**Tropicana Casino & Resort**

**S. Brighton Ave & Boardwalk. Atlantic City**

Reservations—Please call 800-345-8767 and ask for code **HAGR115**

### Basil Downy Mildew Workshop - Pagent Suite A, B, & C

**Thursday, Feb. 5**

**Andy Wyenandt** - Ext. Specialist -Vegetable Pathology, Rutgers

**8:30 AM** - Strategies for Improving the U.S. Responses to Fusarium, Downy Mildew and Chilling Injury in Production of Sweet Basil (*Ocimum basilicum*): An Overview of the National Basil Consortium—**Jim Simon, Prof. Rutgers Univ.**

**9:00 AM**—Downy Mildew and its Occurrence Across the USA.  
**Meg McGrath, Cornell University.**

**9:20 AM**—Fungicides for Managing Basil Downy Mildew, NJ, Andy Wyenandt, Rutgers 9:40 AM - Efficacy of Conventional & Organic Fungicides for Managing Basil Downy Mildew. Long Isl.  
**Meg McGrath, Cornell Univ.**

**10:00 AM**—Importance of Drench or Soil Fungicide Treatments for Successful Downy Mildew Control. **Rick Raid, Univ. of Florida**

**10:30 AM** Economics and Costs of Basil Downy Mildew Control.  
**Ramu Govindasmy & Bill Sciarappa, Rutgers Univ.**

**11:00 AM**—Panel Discussion with Basil Growers

**12:00—Group Lunch** Survey Completion as to Impact and Injury of Basil Downy Mildew

**1:00 PM**—Moving into Genetics & Breeding for Resistance: A Rapid Screening Approach to Identify Resistance to Basil Downy Mildew.  
**Robert Pyne, Rutgers Univ.**

**2:00 PM**—Breeding Basil for Resistance to Downy Mildew & Fusarium: Where We are Now? **Jim Simon, Rutgers Univ.**

### MONMOUTH COUNTY BOA

12-16, 1-20, 2-17, 3-17, 4-21, 5-19

### BASIC PESTICIDE TRAINING

**CORE 9 am - 1 pm—** 2/10, 3/10, 3/24, 4/14, 5/15, 6/9

**3A—9 AM—3 PM -** 4/7, 6/16

**3B - 9 AM—3 PM -** 2/17, 3/3/, 5/19

To register call 800-524-9942

Held at Rutgers Cooperative Extension Ag Bldg.

4000 Kozloski Rd. Freehold, NJ

732-431-7260

### RUTGERS COOPERATIVE EXTENSION MONMOUTH COUNTY

New Jersey Agricultural Experiment Station

PO Box 5033, 4000 Kozloski Rd., Freehold, NJ 07728

Rutgers Cooperative Extension—Agriculture, Family and Community Health Sciences, 4-H Youth Development, Resource Management, and Marine Studies—welcomes this opportunity to send you the enclosed materials for your information and use. Educational programs and information are provided to all people without regard to sex, race, color, national origin, gender, religion, age, disability, political beliefs sexual orientation, or marital or family status.

**Bill Sciarappa, County Agricultural Agent**  
Extension Department Head

Photos: NJ Dept. of Agriculture, Jeff Heckman, Rutgers Univ., B. Sciarappa, V. Quinn, S. Brown

New Jersey Agricultural  
Experiment Station

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