

A REPORT FROM THE  
EXECUTIVE DEAN  
OF AGRICULTURE AND NATURAL RESOURCES

Report to the New Jersey State Board of Agriculture  
December 2014



Raul Cabrera

**Raul Cabrera** accepted the position of Associate Extension Specialist in Nursery Production and Management on December 1. He will join the faculty in the Department of Plant Biology and Pathology in March 2015 and will be based at the Rutgers Agricultural Research and Extension Center in Upper Deerfield, NJ. **Cabrera** received his B.S. in Horticulture from the Universidad Autónoma Agraria in Saltillo, Mexico, and his M.S. in Plant Physiology and Ph.D. in Plant Biology from the University of California-Davis. His areas of expertise include characterization of nutrient and water use efficiency in horticultural crops, plant mineral nutrition, salinity tolerance, and irrigation water quality and management. For the past 15 years, **Cabrera** was an Associate Professor in Ornamental Horticulture at Texas A&M University. At Rutgers, he will be responsible for providing statewide leadership to county and state faculty, and others serving the production nursery industry and related fields. **Cabrera** will teach the Nursery Crop Production course in the department and will develop educational outreach programs for stakeholders in the state, region, and nation. He will also provide expertise in nursery management in the area of improved production and environmental practices, including integrated crop (pest) management in support of the nursery industry.

At New Jersey Farm Bureau's annual meeting on November 18, Associate Professor in Plant Biology and Pathology **Tom Molnar** presented his research on breeding large, tasty hazelnuts that are resistant to eastern filbert blight. **Molnar** is carrying on the vision of late professor **C. Reed Funk**, renowned for his turfgrass breeding program at Rutgers. Recognizing the need for hearty crops to meet world food demands, especially for use on marginal agricultural lands, **Funk** saw nuts as a sustainable crop for food, feed, and fuel. With Turkey leading in worldwide production and Oregon leading in the U.S., **Molnar** cited many qualities that make hazelnuts an attractive crop for New Jersey growers. This low-input, high-value crop can grow in a wide range of pH and soil types, needs little pruning, has fertility requirements similar to tree fruit crops, and doesn't require bees for pollination. Hazelnut has few pests, and after the first three years, the trees are not attractive to deer, although the nuts can attract deer and rodents. The ripe nuts are harvested after they fall to the ground. Currently 90% of the world's hazelnut crop goes into candies and demand exceeds supply. With assistance from Field Researcher **John Capik**, **Molnar** distributed samples of freshly roasted hazelnuts to conference attendees. The first generation of plants from **Molnar's** breeding program will be released in three years and trees go into significant production after seven to eight years. Besides commercial nut production, **Molnar** also anticipates opportunities for the New Jersey nursery industry to produce hazelnut trees both for commercial and residential use. To enhance residential landscapes, his program is also breeding several ornamental hazelnut trees. **Molnar** suggested next summer as a good time for interested growers to visit the research farm. He can be reached at [molnar@aesop.rutgers.edu](mailto:molnar@aesop.rutgers.edu).

Also at Farm Bureau's annual meeting Executive Dean **Bob Goodman** provided attendees with an overview of the continuing focus and initiatives in agriculture at NJAES. By continuing to make strategic investments in infrastructure and personnel, including several key hires and new initiatives that track emerging needs of ag, NJAES is investing in innovation that will ensure agriculture's resiliency in New Jersey. **Goodman** highlighted the work of three of the many productive extension specialists at NJAES: **Anne Nielsen**, specialist in entomology; **Brooke Maslo**, specialist in wildlife ecology; and **Dan Ward**, specialist in pomology and viticulture. **Nielsen** has been documenting the spread of Brown Marmorated Stinkbug and has been conducting research trials on fruit and vegetable crops, evaluating control measures that reduce the reliance on pesticides to control this pest. **Nielsen** is also investigating



ways to manage Spotted Wing Drosophila, which is causing significant damage in berry crops. Recognizing the impact of bear damage to New Jersey agriculture, **Maslo** has been studying bear habitat interfacing with agricultural land and improving damage prevention. In his new role as Director of the New Jersey Center for Wine Research and Education, **Ward** is addressing emerging needs of this developing industry, such as anticipating the appearance of red leaf/red blot virus that attacks wine grapes and looking into vector control. Extension Director **Larry Katz** followed up on **Goodman's** presentation by announcing the new agricultural agents that were hired for Gloucester and Warren counties, and the start of discussions on the other open specialist positions, in particular a weed specialist.

In mid-November, NJAES hosted a Chinese delegation of 15 high-level agricultural administrators and scientists. The group toured the main New Brunswick campus, the Rutgers Agricultural Research and Extension Center in Upper Deerfield, Middlesex County Cooperative Extension's Earth Center, and the Rutgers EcoComplex in Bordentown. Agricultural Agents **Bill Hlubik** (Middlesex) and **Bill Sciarappa** (Monmouth), along with Assistant Director for Bioenergy Technologies & Controlled Environment Ag, **Dave Specca**, explained the roles of NJAES and Cooperative Extension in performing outreach of applied university research. Personnel from Monmouth County Extension gave overviews of 4-H Youth Development, Family and Community Health Sciences, and the Master Gardener/Horticultural program. **Sciarappa** provided results of Chinese ethnic crop studies supported by USDA NRI and SCRI programs. Monmouth County staff served a homemade brunch of *Jersey Fresh* foods with an emphasis on nutrition and health, including cranberries, (frozen) blueberries, apple cider, and vegetables to the delegates during a break in the sessions. For many of the delegates, this was their first taste of these foods. A field tour of community and school gardens was followed by a tour of the Plant Science farm in Adelphia demonstrating tree-nut culture and bio-energy crop production. The presentation of Associate Professor and Turfgrass Breeder **Stacy Bonos'** 15-foot tall *Miscanthus* grass plots coincided perfectly with the historic signing of an energy policy between China and the U.S. to reduce fossil fuels by utilizing solar, wind, geothermal and bio-energy crops.



*A sweet corn variety favored by birds.*

Burlington County Agricultural Agent **Ray Samulis** has been evaluating sweet corn varieties in New Jersey for more than 30 years. His variety trials have examined sweetness, insect and disease resistance, and yields under South Jersey infertile, loamy sand soil types. This year a new component was added to the evaluations, which studied the dynamics of bird damage in the field. Observations and ratings were made regarding where the birds roosted and where they attacked the field. The results showed little to no correlation between these two factors. What did have highly significant correlations were the genetics and variety of sweet corn. Certain sweet corn varieties experienced virtually 100% damage and others as low as 2%. It has been known for years that varieties with good tip cover can fend off bird damage better than those with ears slightly protruding from the husks. But it appears from this study that age, tenderness, and sweetness were attributes that birds can identify even sooner than humans. This study shows farmers, who experience significant bird problems, the varieties that do well and those to avoid in order to limit bird damage. Farmers have long struggled with scare devices, balloons, noise alarm systems, and other technologies to keep birds out of their fields. While most intervention methods work to some degree, it's a meaningful discovery that something as simple as variety selection can be another tool for keeping birds out of sweet corn fields. For 2015, **Samulis** plans to test a newer material named methyl anthralanite, which is a common ingredient in grape soda, to repel birds.