

A REPORT FROM THE
EXECUTIVE DEAN
OF AGRICULTURE AND NATURAL RESOURCES

Report to the New Jersey State Board of Agriculture
October 2014

During field visits to Mercer County organic farms, **Meredith Melendez**, agricultural senior program coordinator, Rutgers Cooperative Extension (RCE) of Mercer County met with growers concerned about negative soil health impacts from copper-based fungicides. In an effort to evaluate soil copper use and the resulting soil copper levels, **Melendez** worked with **Joe Heckman**, specialist in soil fertility and **Stephanie Murphy**, director of the Rutgers Soil Testing Lab, to sample soil at fifteen farms throughout the state. Both conventional and organic farms participated in this study, which was funded by the Phillip Alampi Fund. Two composite samples were taken from each farm: one where copper fungicides had been applied and one where copper fungicides had never been used. The results indicated that total and soluble copper levels were higher on copper-applied soils compared to soils with no copper applied. However, despite the higher copper levels found in these soils they were not high enough to cause plant toxicity or reduce plant growth, nor were the soils showing signs of reduced microbial activity. An additional component of this study involved using the soils for growing greenhouse lettuce. The lettuce was harvested, dried, ground and analyzed for copper uptake. The FMC Innovation Center was a collaborator on this project and Stokes Seed supplied the seed.

Twenty five livestock growers participated in a session on Small Scale Livestock Production and Marketing, presented by Annie's Project New Jersey. The program was held October 14 and 21 at the Warren County Extension Center in Belvidere. The sessions featured "Basic Animal Production," "Budgets for Animal Production Enterprises," "Goals and Strategies for Small Scale Animal Production," "Facilities and Animal Production Needs," "Marketing Strategies" and "Insurance Considerations and Programs." Presenters included **Bob Mickel**, regional livestock agent, RCE Hunterdon County, **Stephen Komar**, agricultural agent, RCE Sussex County, **Barbara O'Neill**, RCE extension specialist in financial resource management, and **Kelly Steimle**, from the New Jersey Crop Insurance program, RCE Salem County.

Silicon is now recognized as a beneficial substance when taken up by plants directly from the soil. Some New Jersey soils have lower than optimum levels of plant-available silicon. Experiments conducted with pumpkin grown on Quakertown and Sassafras soils show that amending soils with silicon can help to control powdery mildew disease. The latest research from Extension Specialist in Soil Fertility **Joseph Heckman**, conducted over the fall/winter of 2013-2014, compared several sources of silicon. Wollastonite, a naturally occurring calcium silicate mineral, was found to be among the most effective plant-available sources of silicon. This calcium silicate mineral was also shown to neutralize soil acidity and raise soil pH much like common agricultural limestone or calcium carbonate. As a naturally occurring mineral, Wollastonite will likely be permitted for use in certified organic farming. Background information on Heckman's soil silicon research is available at <http://njaes.rutgers.edu/pubs/soilprofile/sp-v20.pdf>.

An International Blueberry Workshop was hosted by Rutgers Cooperative Extension and USDA on June 23–26 in Atlantic City. Every four years, research and extension workers throughout North America and overseas meet to exchange ideas and research results on current blueberry issues. In attendance were representatives from Mexico, Chile, Canada, China, New Zealand, and other countries. In addition to updates on current extension and research activities, there were tours of a winery, blueberry production areas, and packing facilities. The group travelled to Whitesbog, where the blueberry industry began with farmer Elizabeth White and USDA's Fred Coville's development of commercial highbush blueberries. The program highlighted new varieties, the management of diseases, and invasive pests like spotted wing drosophila.

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Cristi Palmer, manager of ornamental horticulture at IR-4 Project headquarters, is the principal investigator of an award totaling \$165,344. The project titled "Boxwood Blight Mitigation Strategies" is being supported by the Animal and Plant Health Inspection Service at the U.S. Department of Agriculture.

IR-4 Northeast Region Director David Soderlund announced that the IR-4 Northeast Regional administrative offices will be moved from Cornell/New York Agriculture Experiment Station in Geneva, NY, to Rutgers in New Jersey. This change will occur by the end of 2015 and is due, in part, to personnel changes at Cornell, as retirements of the Regional Field Coordinator and the Northeast Regional Director are imminent. The change will also result in cost savings by housing the unit at Rutgers. **Dan Rossi**, executive director of the Northeast Regional Association of State Agricultural Experiment Station Directors and who holds the role of IR-4 administrative advisor, will become a voting member on the IR-4 project management committee representing the Northeast Region and their respective interests.

The Rutgers' School of Environmental and Biological Sciences (SEBS) Entrepreneurship Ag Program started in spring 2013 and is jointly funded by Rutgers' SEBS/NJAES and VentureWell, a higher education network that supports student inventors. The program begins each spring semester with a 3-credit Entrepreneurial Ag (EA) Jr/Sr Colloquium followed by a nine-week competitive summer internship. In summer 2014, six EA students interned at Rutgers' schools and research centers. The students shared their experiences at a mini-symposium on October 18, hosted by **Mark Robson**, extension specialist in entomology, and **Albert Ayeni**, ethnic crop specialist.

Of Interest:

Although North and South Jersey usually experience similar weather conditions, there are times when there are notable distinctions in the weather pattern of these two regions. Rutgers NJAES State Climatologist **David Robinson** notes the recent dry/wet divide in northern and southern Jersey. **Robinson** reports, "Combined with below-average precipitation in August, the northern half of New Jersey has become quite dry. Conversely, rainfall has been more common in the south, thus despite a drier-than-average September, the two-month total is slightly above average. Looking first at September, statewide precipitation averaged 2.82". This is 1.25" below the 1981-2010 average and ranks as the 46th driest September since 1895. From Hunterdon, Somerset, and Union counties northward, only 1.49" fell, which is 3.00" below average and ranks as 7th driest. The southern counties averaged 3.47", which is 0.40" below average and ranks as 56th wettest."

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