

A REPORT FROM THE
EXECUTIVE DEAN
OF AGRICULTURE AND NATURAL RESOURCES

Report to the New Jersey State Board of Agriculture
July 2015

In the spring issue of his county newsletter, *Changing Times*, Monmouth County Agricultural Agent **Bill Sciarappa** reports his observation that traditional food selection criteria for commodity crops has changed from storage, color, and yield over to nutritional content, taste, and specialty cultivars. He notes this trend can be expedited locally with the new Rutgers NJAES offerings upon their acceptance by New Jersey growers and consumers. **Sciarappa** states, "Commercial growers think of a bumper crop as outstanding yields or high quality compared to typical season harvests. University ag scientists think of such great years as an outstanding culmination of years of research. Rutgers 2015–16 may mark as a bumper crop of new cultivars soon to be released." The NJAES release list includes:



The '**Rutgers 250'** tomato in honor of the university's 250th anniversary, based on the parentage of the original Rutgers tomato. The final selection will be made this season from statewide field trials of six similar cultivars.



Rutgers strawberries, featuring new great-tasting cultivars bred especially for Northeast growers as an alternative to the super-large and mediocre tasting California Chandler.



'**Rutgers Scarlet'** lettuce cultivars, which are undergoing grower test trials in North, Central and South Jersey and will have fall plantings on research and grower farms.



Rutgers selections for hazelnut cultivars resistant to Eastern filbert blight, which have also yielded impressive results. These trials can be seen at both Rutgers Research farms in Monmouth County—Adelphia and Cream Ridge. A twilight tour is planned to visit NJAES plant breeder Tom Molnar on the New Brunswick Campus on August 13 (see Events section).



Downy mildew-resistant **sweet basil** cultivars, which are showing a second straight impressive year in field trials with complete disease resistance.

A study to determine if small-scale anaerobic digestion is a feasible and cost-effective alternative for equine manure and bedding waste management via conversion of the waste streams into biogas and organic soil nutrients was conducted by Extension Specialist in Animal Sciences **Michael Westendorf** and Associate Professor in Environmental Sciences **Donna Fennell**, in cooperation with Spectrum BioEnergy. Spectrum installed its biogas system to treat horse waste at an equine facility located in Millstone Township, NJ. The cylindrical anaerobic digester had a capacity of 1 ton (1/2 ton of feedstock), or 7200 gallons. Spectrum BioEnergy tested two types of waste streams/bedding: straw and pelleted wood. A large portion of the horses at this farm use straw bedding, which ultimately produces a straw bedding/manure waste stream that is collected in piles, and transported to a local mushroom facility. An alternative bedding, Woody Pet[®], is combined with fresh softwood chips and mixed with horse manure.

Results of the study were assessed in terms of system effectiveness, ease of use (operability), and cost-effectiveness. For system effectiveness, it was determined possible to anaerobically digest horse manure and bedding with a small-scale anaerobic digestion system. However, effectiveness is drastically limited by the composition of bedding material. Unlike waste streams such as food waste or pure manure, horse manure bedding is difficult to break down and is not an energy-rich substance. Ease of use was limited also due to the nature of horse bedding. However, once a better grinding solution was found, feeding the straw was a quick process. For cost-effectiveness, small-scale anaerobic digestion of horse manure plus bedding is not considered cost-effective. Technical results were positive, though it was noted that feed stocks are not considered energy-rich, as compared to other organic wastes.

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Horses can be significant contributors to water quality impairment with the 50 pounds of manure they produce every day. Horse manure composting is one way to reduce this impairment. A national Horse Manure Management Webcast was held on June 19, as part of the Livestock and Poultry Environmental Learning Center Educational Webcast Series. Extension Specialist in Animal Sciences **Mike Westendorf** and Sussex County Agricultural Agent **Steve Komar** participated in the webcast, which covered steps to start the process of composting manure on horse operations. Presenters discussed bedding and the impacts on composting, design of composting facilities, and considerations for both large and small operations.

Carey Williams, associate director of extension at the Equine Science Center and associate professor in the Department of Animal Sciences at Rutgers, received the 2015 American Society of Animal Science and Equine Science Society's Equine Science Award. She was honored at the society's annual meeting in Orlando, FL, in July.

Of Interest:

June rainfall averaged 8.21 inches across New Jersey, which was 4.19 inches above the 1981–2010 normal and ranked 4th wettest since 1895. Temperatures and the resulting wet growing conditions from June rains created a favorable environment for plant diseases. Extension Specialist in Vegetable Pathology **Andy Wyenandt** reports that in early July the first report of late blight in the state and region was found on two tomato fields in Morris County and the first report of cucurbit downy mildew was confirmed on cucumber in Salem County. **Wyenandt** reported that the conditions in June were ideal for pathogens such as Phytophthora blight (*P. capsici*) on pepper, eggplant, tomato, and cucurbit crops which can be found on most farms in the southern part of the state.

In the new video "Agritourism & Risk Management on New Jersey Farms", Gloucester County Agricultural Agent **Michelle Infante-Casella** discusses the work the NJAES Agritourism Leadership Team is doing with farms and farmers to increase safety and regulatory compliance in agritourism and on-farm activities. The video can be viewed at: <https://youtu.be/Ut1l8S9DguU>.

Events:

Central Jersey Twilight Meeting – Hazelnut Production Tour

August 13, 3:30 – 9 p.m., Log Cabin/Pavilion at Rutgers Gardens, 112 Ryders Lane, New Brunswick, NJ 08901, Registration is limited; BBQ: \$15, Contact: RCE of Monmouth County, 732-431-7260, ext. 7261

Vegetable Growers Twilight Field Tour

August 20, 5 – 8 p.m., RAREC, 121 Northville Rd., Bridgeton, NJ 08302, For more information contact Andy Wyenandt at 856-455-3100, ext. 4144

The Great Tomato Tasting

August 26, 2015, 3–7 p.m., Rutgers Snyder Research Farm, 140 Locust Grove Rd., Pittstown, NJ 08867, RSVP: 908-730-9419, Downy mildew resistant basil varieties bred by Professor Jim Simon will be featured at the tasting.

New Jersey County Fairs in August	
Atlantic County 4-H Fair	August 6 - 8
Hunterdon County 4-H & Ag Fair	August 19 - 23
Mercer County 4-H Fair	August 1 – 2
Middlesex County Fair	August 3 – 9
Salem County Fair	August 4 – 7
Somerset County Fair	August 12 – 14
Sussex County Farm & Horse Show/NJ State Fair	July 31 – August 9
Warren County's Farmers' Fair	July 25 – August 1

