NEWS FROM THE INTERIM DEPARTMENT HEAD
John Dole

Horticulture Industries and NCSU - Horticultural Science Department:
A Partnership That Works!

North Carolina’s diverse horticulture industry impacts every county in the state. As the state’s agricultural industry evolves to meet changing economic conditions, scores of farmers enter horticultural crop production, creating on-farm and off-farm jobs in many rural areas. Most horticultural businesses are small, family owned companies – the sector which will help lead NC out of the recession. The NCSU Horticultural Science Department is working for NC and for NC’s horticultural industries.

How important is horticulture to North Carolina?

• Green Industries contributed $8.6 billion dollars and 151,982 jobs to the state in 2005, with $912 million in sales at the farm alone in 2009.
• NC’s horticultural vegetable, fruits and nut crops had $511 million in sales at the farm alone in 2009 (economic impact values not available).
• Greenhouse and nursery crops rank third in NC agricultural statistics, after broilers and hogs for the top agricultural industries (2009).
• NC produces 47% of the nation’s sweet potatoes (Ranked #1 in U.S.).
• NC produces 24% of the nation’s Christmas trees (Ranked #2 in U.S.).
• NC is the third largest producer of processing cucumbers.
• NC is the fourth largest producer of greenhouse crops, nursery crops, and fresh market cucumbers.
• NC is the fifth largest producer of blueberries.
• NC has the largest single greenhouse in the U.S. and one of the most modern greenhouse production facilities worldwide, located north of Charlotte in Huntersville.
• NC is in the top ten states for production of cabbage, tomatoes, snap beans, apples, bell peppers, squash, watermelons, and grapes.
• The NC peach industry generates more than $11-15 annually selling high-quality peaches directly to consumers.

• The organic industry is the fastest growing segment of agriculture, with NC certified or exempt farms having 9,600 acres and $53 million in sales in 2008.

• An astonishing array of specialty horticulture and natural products are being grown in NC, ranging from heirloom tomatoes to herbs to fresh cut flowers.

• These small but fast growing industries are hard to track, but gross returns can reach up to $40,000/acre. One example is the hops industry, which has increased from 1 grower in 2007 to 20 growers today, producing hops for 48 registered breweries and home brewers.

How NCSU has benefited horticultural industries:

• MCP (SmartFresh), an anti-ethylene agent developed at NCSU, has revolutionized the apple industry, both in NC and worldwide, and was adapted for industry use by Horticultural researchers. It is considered the most significant development in postharvest research for all crops, and for basic science, in the last 30 years. The technology is also used in other horticultural postharvest applications, such as cut flowers.
• NCSU varieties of sweetpotatoes are planted on approximately 80% of the acres in NC.
  o Covington alone provided $150 million in gross revenue to the sweetpotato industry in 2010.
• Plants released by the JC Raulston Arboretum at NCSU have contributed $10.5 million/year to the ornamental nursery industry.
• NCSU varieties of blueberries are planted on approximately 68% of the blueberry acres in NC.
  o NCSU varieties of blueberries provided approximately $39 million in gross revenue to North Carolina farmers in 2010.
  o NCSU blueberry variety O’Neal was the most widely planted variety in warm blueberry production areas worldwide in 2005.
  o Blueberry yields have doubled in the past 20 years due to improved cultural practices pioneered by NCSU faculty at the Horticultural Crops Research Station in Castle Hayne and at main campus in Raleigh.

• Percent of NC tomato acreage planted to NCSU varieties, 2010: Approximately 60%.
  o Gross revenue of NCSU’s tomato varieties in 2010: $17 million.

• NCSU breeding is reviving the raspberry industry in western NC with the new variety, Nantahala, released in 2007.
• NCSU peach breeders and researchers have developed profitable peach varieties and management strategies.

• New NCSU varieties of ornamentals such as butterfly bush, redbud, hydrangea, flowering quince, summersweet, hypericum, pearlbush, and sweetshrub support NC’s $777 million dollar (farm gate) nursery crop industry.

How NCSU Horticultural Science Department is responding to the challenges:

• NCSU’s Horticultural Science Department was ranked among the top three departments in the country in 2010 by an independent review team.
• Horticulture Researchers have generated an average of $6 million/year in outside funding to support their programs. One researcher alone has raised $5.2 million over the last ten years in National Science Foundation funding and $483 thousand in USDA/AFRI funding.
• The Department has developed a distance education curriculum, two certificate programs and one new distance education Master program to meet the horticulture education needs of NC citizens, many of whom are taking courses from their homes and offices.

• Over the last 20 years, the department has graduated over 1900 undergraduate students, 900 in our 4-year Bachelor of Science program and 1000 in our 2-year Associate Degree program. In the past five years alone, 200 received their Bachelors degree, and 110 received their Associate's degree. In the last 10 year, the Graduate Program has completed 125 MS and PhD students. Many of the leaders in our horticultural industry are NC State Horticulture graduates.

• The Master Gardener program has trained thousands of volunteers across the state to provide information to the public. In 2007 (most recent year for data), there were 4,084 Master Gardeners, 774 trained just that year. They answered 69,563 phone calls, examined 18,182 plant samples and coordinated 250 demonstration gardens, 97 school gardens and 494 school programs. Estimated value of services and funds raised to North Carolina: $4.4 million.

• NCSU has created the Plants for Human Health Institute in Kannapolis to bring together Horticulture Scientists with researchers from a broad range of other fields to develop mainstream fruit and vegetable produce with enhanced health benefits and introduce new and underappreciated crops and products.

• Faculty at the Mountain Horticultural Crops Research and Extension Center provide high quality research and extension programs for the people of western North Carolina.

• Faculty at the Center for Environmental Farming Systems (CEFS) have received over $23 million in competitive grant funding in their efforts on behalf of local foods and sustainable agriculture for North Carolina.

• In 2010, the NC Pesticide Safety Education Program provided state-wide educational programs on proper pesticide handling that were attended by 4,812 agricultural producers. These programs meet federal and state requirements for recertification of nearly 40% of our state's farmers.

• The NCSU IR-4 Field Research Center conducts an average of 28 residue trials, annually, to generate data that is used to support registration of pest control products in specialty crops. Since 2000, data generated from trials at NCSU have resulted in the registration of more than 80 product-crop combinations.

---

**FACULTY NEWS**
Todd Wehner and Elaine Levin

Congratulations to Bryce and Sue Lane! Their eldest daughter, Sarah Ivy (NCSU Horticultural Science graduate, 2003) and her husband Lee (NCSU, MS, Horticultural Science, 2002) had their third child on Monday, May 17, 2011. Paige Susanna Ivy was born at 3:05 pm, weighing 8 pounds, 9 ounces. Brothers Tate, 2, and Lane, 4, proudly welcomed their new sister home. Bryce and Sue now have 4 grandchildren, and another due in November!

Todd Wehner finished his term as president of the National Association of Plant Breeders at the annual meeting held on May 22-25, 2011, hosted by Texas A&M University.

Shengping Zhang, from the Chinese Academy of Agricultural Sciences, is working as a visiting scientist on cucumber genetics this summer, with Todd Wehner.
Frank Blazich received the Outstanding Alumni Award on Saturday, May 14, 2011 on the University of Vermont campus, Burlington, Vermont. The award included a hand-made turned wooden bowl made of woods local to the Vermont area.

The University of Vermont’s web site says: Frank Blazich, of Raleigh, North Carolina is internationally known for work in plant propagation. In fact, the Christmas tree and nursery industries widely use seed treatments and propagation techniques that he developed.

But just as impressive is his propagation of knowledge and scholarship, through a generation of men and women whom he has taught and mentored.

For these reasons, Blazich received an Outstanding Alumnus Award on May 14, 2011, during the University of Vermont College of Agriculture and Life Sciences (CALS) alumni and friends award dinner. More than 180 people attended the event held at the campus’ Davis Center. He was one of three alums, along with Sam Cutting III and Diane Bothfeld, to receive 2011 Outstanding Alumni Awards and among seven annual award winners.

Perhaps no one at UVM knows Frank Blazich better than Mark Starrett, now one of the Plant and Soil Science faculty, who once was Professor Blazich’s Master’s and Ph.D. student at North Carolina State University and is an exemplary Blazich student.

Blazich was a highly decorated infantryman and parachutist during the Vietnam War in 1965-1967, and then he used the G.I. Bill to fund his education.

He graduated in plant and soil science magna cum laude from UVM in 1971 and 1973. He
Jon F. Ort, 63, died Monday, April 4, 2011 at his home in New Hill, North Carolina.

Jon was born in Bryan, Ohio on March 26, 1948. He received three degrees (B.S., M.S., and Ph.D.) in Zoology and Poultry Nutrition from Ohio State University. Jon retired after 30 years of service at NCSU, most recently serving as Assistant Vice Chancellor for Extension, Engagement and Economic Development, and as Associate Dean of the College of Agriculture and Life Sciences at NCSU as well as the Director of the NC Cooperative Extension Service.

Joining NCSU in 1979 as Assistant Professor and Undergraduate Teaching Coordinator in the Department of Poultry Science, he was then promoted to Associate Professor in 1984, and in 1988, was promoted to Executive Director of the CALS Alumni Society and Assistant Director of Academic Programs. In 1989, he became Director of the Agricultural Institute and Professor of Poultry Science. He became Assistant Dean in 1991 and was promoted to Assistant Vice Chancellor, Associate Dean and Director of the NC Cooperative Extension Service in 1995, serving until retirement in 2010.

He was named to NCSU’s Academy of Outstanding Teachers (1984, 1986), Outstanding Faculty Member in the Agricultural Institute (1980, 1981, 1982), awarded the USDA Honor Award for Superior Service (1997, 2000), and many other honors and recognitions for his service in the fields of academics and academic administration. He also served on numerous boards and committees at the local, regional, and national levels.

Jon's greatest loves were his children, family and the great outdoors. He was an avid hunter, boating enthusiast, talented musician, high school athlete and a wonderful friend to many. He enjoyed traveling with his family and spending time with his mother and father.

He leaves his father, Lewis Ort, his stepson, Brad Thompson, his wife Cristi, daughters Katie and Hunter Ort, their mother Debbie Ort, and many close family and friends. His mother Kathryn Ort precedes him.

In lieu of flowers, the family requests that memorial donations be made in Jon's memory to the Dr. Jon Ort Family Scholarship Award, Box 7645, NCSU, Raleigh, NC 27695.

Mary Ann Lila, Director of the NCSU Plants for Human Health Institute, located at the NC Research Campus in Kannapolis, appeared on
“The Dr. Oz Show” May 5, 2011. The show’s producers visited Dr. Lila’s lab on March 18, then flew her to New York City on March 23 for the live taping of the show. The topic of the show is “cancer detectives.” Dr. Lila, a David H. Murdock Distinguished Professor and faculty member of the Department of Food, Bioprocessing and Nutrition Sciences, studies health-enhancing compounds in blueberries and other berries. She works with scientists and students around the world to explore natural products for biomedical use. The purpose of her appearance on the Dr. Oz Show was to discuss the multifaceted protection from cancer and other diseases that blueberries, black currants and muscadine grapes provide. Mehmet Oz, MD, is the Daytime Emmy Award-winning host of “The Dr. Oz Show.” He is Vice-Chair and Professor of Surgery at Columbia University. He directs the Cardiovascular Institute and Complementary Medicine Program at New York Presbyterian Hospital. Previously, he was the featured health expert on “The Oprah Winfrey Show.” In addition to belonging to every professional society for heart surgeons, Dr. Oz was named Forbes’ #3 most influential celebrities and one of Time magazine’s 100 Most Influential People. The show aired on various network stations across North Carolina.

**Awards**

Wayne Buhler has received one of the 2011 Stewardship awards from The Pesticide Stewardship Alliance for his “Program Innovation”. The two programs, The Southern Region Pesticide Safety Education Center and The Pesticide Environmental Stewardship Website have served as outstanding resources to improve pesticide safety training and education in the United States and in the world. Wayne's creativity and dedication have anchored these programs.

NC State Grange Search for Excellence Awards promote and identify professional excellence within all facets of the North Carolina Cooperative Extension Service. There are five team awards and eight individual awards. A group of NCSU College of Agriculture and Life Sciences faculty members received an award in the specialist category for helping farmers during the phase-out of a popular fumigant.

Jimmy Gentry, Grange President, presented the award on April 14, 2011 at a joint meeting of the North Carolina Cooperative Extension Service Foundations boards in Raleigh. The team was recognized for efforts over the last eight years to help North Carolina fruit and vegetable growers find alternatives to the pesticide methyl bromide.

Methyl bromide is a broad-use fumigant with ozone-depleting properties. Scheduled to be phased out by January 1, 2005, except for amounts allowed under critical use exemptions, growers did not have a pesticide to substitute for methyl bromide, which controlled diseases, weeds and nematodes. Without methyl bromide, many farmers feared they would lose the ability to efficiently grow their crops. Growers of strawberries, tomatoes, peppers, melons, cucumbers and squash were especially concerned, as methyl bromide was their primary method of pest control.

Finding alternatives involved trials over several seasons. The Environmental Protection Agency (EPA) allowed limited production and import of methyl bromide for growers’ use after the 2005 phase-out date under critical use exemptions. Each year since 2005, the extension team applied for the exemptions on behalf of growers in North Carolina and other southeastern states, based on the lack of technically or economically feasible alternatives to methyl bromide.
Plant pathologists, weed scientists, horticulturists, an agricultural economist, an agricultural engineer and an entomologist, made up the NC State team which tested combinations of pest management strategies, both chemical and non-chemical. No direct substitute for methyl bromide was available. The team encouraged growers to practice integrated pest management and to combine chemical and non-chemical techniques. Integrated pest management, or IPM, is a science-based system of pest management based on the biology of the pest or disease.

The team helped growers adopt new cropping methods. Some growers used a variety of different pest control methods. Other growers changed their cropping systems completely; and some even transitioned to organic production.

Present at the ceremony were Dr. Katie Jennings, Research Assistant Professor of Horticultural Science, Dr. Frank Louws, Professor of Plant Pathology and Director of the National Science Foundation Center for Integrated Pest Management; Dr. David Monks, Assistant Director of the NC Agricultural Research Service; Dr. Zvezdana Pesic-VanEsbroeck, Director of NC State’s Micropropagation Unit; and Steve Toth, Integrated Pest Management Coordinator. Also recognized were Dr. Gina Fernandez, Professor of Horticultural Science; Dr. Garry Grabow, Assistant Professor of Biological and Agricultural Engineering; Dr. Barclay Poling, Professor of Horticultural Science, and Dr. Charles Safley, Professor of Agricultural and Resource Economics.

Team members researched each pest, disease and weed that methyl bromide had controlled, filling in knowledge gaps in the industry. Fernandez focused on alternative farming systems. Grabow trained extension agents on irrigation technology. Jennings and Monks researched weed management. Pesic-VanEsbroeck provided plants for research. Louws investigated soil-borne pests and other diseases and conducted farming systems research. Toth managed the critical use exemption applications. Poling evaluated various fumigants and other planting systems in strawberries, and Safley provided information about the economics of different crop management approaches.

**DEPARTMENTAL HIGHLIGHTS**

Todd Wehner

The Department of Horticultural Science at NCSU is pleased to announce the following degrees were awarded May, 2011:


**Christophe La Hovary** (PhD). Allelochemicals in Secale cereale: Biosynthesis and Molecular Biology of Benzoxazinones.

**Todd J. Rounsaville** (MS). Cytogenetics, Micropropagation, and Reproductive Biology of Berberis, Mahonia, and Miscanthus.

**Colleen S. Sparks** (MHS). Assessing Extension Educators’ Needs for Homeowner Pesticide Use and Safety Information.
Endowments are an important part of the support programs in Horticultural Science. Twelve faculty have started endowments, or have had endowments started in their honor. These include Professors Sanders, Correll, Werner, Raulston, Harris, Powell, Monaco, Cochran, Covington, Gardner, Larson, and Ballinger. There is also an endowment to honor Mrs. Pittman, a former undergraduate secretary.

In this newsletter we will discuss the endowments from Tom Monaco and Kim Powell.

The Thomas J. and Virginia S. Monaco Horticultural Science Graduate Fellowship Endowment for Diversity provides fellowship awards for graduate students enrolled in the Department of Horticultural Science in the College of Agriculture and Life Sciences at NCSU. The purpose of the award is to attract underrepresented groups (currently those groups defined as women and minorities) to the graduate programs.

Tom Monaco began his career in the Department of Horticultural Science in 1967, and was promoted to Associate Professor in 1973 and Full Professor in 1977. His research and teaching responsibilities were in Weed Science. Over his career, he has served as advisor or co-advisor for 15 Masters degree students; 15 PhD students, and has served as a member of over 30 other graduate advisory committees. In 1988, he was appointed the eleventh Head of the Horticultural Science Department and he retired from that position on May 1, 2003.

Virginia Monaco graduated from Rex Hospital School of Nursing and attended Watts Hospital School of Anesthesia. As a Certified Registered Nurse Anesthetist (CRNA), she has been employed by Critical Health Systems (formerly Raleigh Anesthesia Associates) and has subsequently become the Chief CRNA of that practice. Thomas and Virginia have three sons who have received BS degrees from NCSU. They are Dr. Thomas J. Monaco, Jr.; Dr. Joseph W. Monaco and Michael A. Monaco, Esquire. Tom says: “The endowment was set up to honor both our careers, but especially my wife Jenny, who did not have the opportunity to attend college because of her family finances. Jenny had three brothers, and the philosophy at that period of time in our history is that the males had first priority for college educations, since they were perceived as being the bread winners of the family. Thus, Jenny was sent to a two year nursing school while her brothers attended four year universities. This was the motivation
for us to establish the endowment to serve under-served "minorities". We additionally targeted graduate programs, since that was such a large part of my career.”

The Kim Powell Horticultural Science and Landscape Architecture Scholarship Endowment provides scholarships for undergraduate students enrolled in Horticultural Science and Landscape Architecture at NCSU, alternating yearly between the two departments.

Merle Autrey “Kim” Powell, Jr. grew up on the family farm in Davidson County in the 1950s. He developed a good work ethic at an early age, helping the family grow tobacco, strawberries and vegetable crops. The principles he learned as a child were the foundation for his formal education. He entered Guilford College in 1968, completed an economics degree in 1972 and a master's in Landscape Architecture from the NC State School of Design in 1974.

In January 1975, Powell took a job with the NC Agricultural Extension Service as an urban horticulture agent in Forsyth County. After a short time he, accepted a position at the NCSU Horticulture Department as an Assistant Professor/Extension Landscape Specialist. Over the next 30 years, he moved through the academic ranks to Professor, and also became a registered Landscape Contractor (# 181 in 1976) and a Landscape Architect (#455 in 1984). Powell authored more than 200 extension publications, was a regular member of UNC-TV's “Almanac Gardener” and typically traveled 30,000 miles a year, working with both county extension agents and the professional landscape industry. During his last few years in the department, he taught horticulture courses in landscape contracting and irrigation. Powell worked closely with the NC Nursery and Landscape Associations. He wrote the study manual and exam for the NC Board of Landscape Contractors and training manuals and exams for the NC Certified Landscape Technician and NC Professional Plantsman certifications.

Powell had planned on retiring in 2005, but was asked to serve as Interim Director of the JC Raulston Arboretum until a national search for a permanent director was completed. He is credited with making the gardens more useful and visitor-friendly. He officially accepted the title of Professor Emeritus in December, 2005.

Kim resides on a small farm in Chatham County, with his wife Rori. Aside from farm-related activities, he has an active landscape practice across eastern NC. Their daughter, Erin Powell, earned bachelor's ('02) and master's ('04) degrees from the College of Textiles at NC State and is currently employed by Textile Extension and working on a Ph.D. Their son, Sam, earned his bachelor's degree in the Horticultural Science Department ('06) and has started his own landscape business. Just as their father did in his day, they too developed a good work ethic early in life and each paid their own way through school.
Kilgore’s Bamboo Bistro

Resplendent, in front of Kilgore Hall and attracting a lunch crowd, is the latest creation from Will Hooker’s Landscape Design class. The bistro is made with free materials and a little sweat equity, and gives students a chance to follow the construction process from sketch to finished project. There are still final touches to add, including new plantings and painted designs on the furniture. Will says: “My sense is that people like what we do in this space because it is fun and whimsical rather than cold, sterile and institutional.” The structure will likely stay for two to three years, when a fifth class project will take shape.

Dolores Lawson, Administrative Support Associate in Horticultural Science, graduated on Saturday, June 11, 2011 from ECPI University with an Associate’s Degree in Medical Assisting. Congratulations, Dolores!

Staff Report - April Faculty Meeting

The SPA staff report from the April 11, 2011 faculty meeting included the 10% budget reduction plan submitted to CALS by Horticultural Science. This includes faculty members paying about 20% more of SPA salary and 10% overall reduction in the departmental operating budget. The actual required budget cut is still unknown. It will likely be > 10%, and, in addition to more operating budget reductions, faculty members will be asked to pick up a greater percentage of SPA salary.

NCSU/CALS is considering potential organizational unit combinations (e.g., combine accounting offices among departments). This plan should be ready by October 2011 and implementation will take place over a year after that. This plan does not affect our budget.

Monies available are being used for departmental facilities improvements. Current projects are the ceiling in the Department Head office, the front offices, and Labs 1 and 3. The goal is to refurbish 1 lab/year in Kilgore Hall.

To better serve present needs, the Laboratory Committee and the Cooler Committee will be combined, creating a long range plan for lab and cooler assignments in Kilgore Hall.

Our Database and Outreach Committees’ present goal is greater publicity for our department. These committees are evaluating existing databases and lists that could be used within their own systems (rather than incorporate into one aggregate database) to contact Horticulture alumni, industry personnel, Master Gardeners, and all other folks interested in horticulture. The committees propose to publish a Horticultural Science newsletter twice per year, distributed electronically. The first draft of this newsletter was circulated. This

STAFF NEWS
Elaine Levin

Congratulations to Amy Hamilton and Gabe Noard, who welcomed their baby boy Uriel Ellory Noard on May 17, 2011 at 7:20 am, and weighing 7 pounds, 14 ounces. Amy is a Research Specialist at our Mountain Horticultural Crops Research and Extension Center, working with Jeanine Davis in organic, herb, mushroom, and specialty crops research and extension program.
Newsletter will include summary stories from each of the research, extension and teaching groups in the department, and will have photographs.

The Departmental Committees gave statements at the meeting. The Greenhouse Committee’s head, Bill Fonteno, reports reduction of pest populations in the greenhouses; and plans a big greenhouse “cleanup” after the completion of spring semester. The Horticulture Field Laboratory Committee headed by Brian Whipker, reminds that space allocations will be assigned soon. Ted Bilderback reports that the JC Raulston Arboretum’s Gala is May 1, 2011. Nancy Creamer announces that the Farm to Fork picnic is June 26, 2011.

Steve Meyers stated that the PAX plant sale was a great success, grossing over $24,000.

Thanks to the SPA representatives, Chris Harlow, Angela Oldham, and Amy Hamilton, for their report on this meeting.

---

**Graduate Program**

Julia Kornegay and Rachel McLaughlin

Horticultural Science Graduate Student Association (HSGSA) Officer Elections were held April 18-20, 2011. Officers elected to serve during the 2011-2012 term are:

**President:** Alicain Carlson

**Secretary-Treasurer:** Liz Bridges

**Social Chairperson:** Jason Lattier

**D. Mason Pharr Seminar Chairperson:** Stephen Meyers

**UGSA Representative:** Christine Bradish

**Computer Chairperson:** Brigitte Crawford

**International Student Representative:** Shen Ma

Congratulations to those elected and to all who were nominated.

---

**Pi Alpha Xi Update**

The successful Pi Alpha Xi Spring Plant sale was held on April 9 and 10, 2011, at the JC Raulston Arboretum.

Kelly Oates, Graduate Research Assistant, reports: Good weather, a gorgeous venue, great volunteer participation, and a nice plant selection helped us to sell a lot of excellent plants! Both undergraduate and graduate students helped throughout the weekend, and everyone’s hard work made the sale successful. We grossed a whopping $29,000., meaning that we’ll have plenty of money to allocate back to the horticulture community in our area. We’re so thankful for everyone’s hard work and we are...
delighted to have so many funds to donate. Our allocation meeting will be at the end of April, where we will “harvest the fruits of our labor” and give out some grant money! On behalf of PAX members, we appreciate both the opportunity to hold the plant sale at the JCRA each Fall and Spring and the fabulous chance we get to interact with each other and with the plant community. We look forward to the next sale in the Fall!

Awards

Kelly Oates, who is pursuing her MS degree with Tom Ranney, received the 2011 Outstanding Graduate Teaching Assistant Award. The University Graduate Student Association Teaching Effectiveness Committee selected the top TAs for the 2010 calendar year. The award recognizes the exceptional contributions of the Graduate Teaching Assistants to the educational excellence of the University. These students were honored at the banquet held on March 24, 2011. Congratulations, Kelly, on your well-deserved recognition!

On April 20, 2011, the Graduate School recognized those graduate students who had completed the Certificate of Accomplishment in Teaching (CoAT) program, the Mentoring and Teaching Practicum, and the Preparing the Professoriate (PTP) program. Senior Vice Provost Emerita Dr. Katie Perry and Dean Duane Larick, Dean of the Graduate School, awarded 49 certificates to these students who had successfully completed the Certificate of Accomplishment in Teaching program. This program is part of the Graduate School's Preparing Future Leaders initiative, and is designed to offer training, support, and professional development experiences for graduate students. Connie Fisk completed the CoAT for Fall 2010-Spring 2011. Congratulations, Connie, for your good work!

The Scholarship Awards Committee and the Board of Directors of the American Society for Horticultural Science have awarded Christina Bradish an ASHS Student Travel Grant in the amount of $500. for the 2011 Annual Conference to be held in September. Christina is pursuing her MS degree, working with Penny Perkins-Veazie and Gina Fernandez. Congratulations, Christina!
NEWS FROM AROUND NORTH CAROLINA

Center for Environmental Farming Systems (Goldsboro)
Nancy Creamer and Lisa Forehand

The Center for Environmental Farming’s 10% Campaign has signed the grocery store chain Piggly Wiggly as the first grocery store to pledge to buy more foods from local North Carolina producers. This is part of Piggly Wiggly’s commitment to the 10% Campaign. Piggly Wiggly prides itself on being “America’s first” self-service grocery store”, and now has added another first to its list, as now it is the first grocery store to pledge to buy more foods from local producers.

Since 1999, CEFS has run an 8-week summer internship program in sustainable agriculture. This year we are excited to welcome 14 students into the program. These students come from AR, MA, NJ, OH, SD, DE, WV, CT and NC. Interns participate in a wide variety of activities, including lectures, hands-on field experience and discussion groups, as well as working closely with a faculty member on a research project, either at NCA&T or at NCSU.

JC Raulston Arboretum (Raleigh)
Ted Bilderback

2011 American Garden Award

Bernadette Clark, Bedding Plant Trials Coordinator, informs us that the JC Raulston Arboretum will participate in the 2011 American Garden Award. Only 23 prestigious public gardens across the United States are part of this program. The Arboretum has on display seven new varieties that some of the world's most prominent breeders have selected to compete in this program. Please visit the American Garden Award site (http://www.americangardenaward.org), view the flowers, and vote on the one you feel has the most appealing garden characteristics. The seven entries for 2011 are:

1. Dahlinova Hypnotica® Lavender dahlia (Dahlia)
2. KAHORI® dianthus (Dianthus superbus)
3. Uchu™ ornamental pepper (Capsicum annuum)
4. Easy Wave® Neon Rose spreading petunia (Petunia 'PAS760700')
5. Picobella™ Rose Star petunia (Petunia milliflora)
6. URDIVA® Light Blue scaevola (Scaevola)
7. SunPatiens® White variegated spreading impatiens (Impatiens)

Voting is open from May 13 through August 31, 2011. Winners will be announced in September. Cast your vote!

The Green Industry Reunion is an invitation for all Horticultural Science alums and friends of the Horticultural Science Department and JC Raulston Arboretum to come and celebrate past acquaintances, great careers and future successes. November 18, 2011 will be an evening of fun!
Wake Up! It’s Spring! This program, designed for children ages 5 to 9, launched at the JC Raulston Arboretum on March 26, 2011. Children and their parents were welcomed to the new educational event, and more than 38 participants showed up on a chilly Saturday morning to learn about the natural world, explore plants, insects and the soil. This program was free, open to the public, and enjoyed by all attendees.

NC Research Campus (Kannapolis)
Mary Ann Lila, Tara Vogelin and Penny Perkins-Veazie

The NC Strawberry Project’s purposes are to breed a better NC strawberry, introduce chefs of tomorrow to local farmers and agricultural research, and to increase awareness among consumers. The Project has garnered attention in print, radio and TV media outlets across the state and beyond. Faculty member Jeremy Pattison is one of the co-PIs on this grant along with James Oblinger, Department of Food, Bioprocessing and Nutrition Sciences, and Leah Chester-Davis, Communications. The Project is in full swing. It is the first-of-its-kind partnership between NCSU and Johnson & Wales University. It is supported by the Golden LEAF Foundation. Every county center will receive background sheets about the project, a strawberry industry fact sheet, information cards for strawberry growers and information about the NC Strawberry Project, including two of Chef Mark Allison's strawberry recipes. Chef Mark is the Dean of Culinary Education at Johnson & Wales. Read more about the NC Strawberry Project at http://plantsforhumanhealth.ncsu.edu.

N.C. State Receives Cabbage Germplasm Collection from Monsanto

NCSU’s Plants for Human Health Institute at the NC Research Campus recently received an extensive cabbage germplasm collection for its research program. Monsanto Company gifted the collection to NC State.

“The private to public transition of an advanced vegetable breeding program is unique,” says Allan Brown, a researcher with the Plants for Human Health Institute. “To our knowledge, this cabbage germplasm collection represents the last large-scale cabbage breeding program in the United States. We intend to utilize this generous gift to address the needs of cabbage growers in North Carolina by developing new and improved varieties that will increase demand and expand production.” The material includes germplasm from the United States, Europe and Japan. The collection
consists primarily of blue-green to green varieties, but also includes red and Savoy cabbages. The collection has the potential to provide resistance to key diseases such as black rot and *Fusarium* yellows.

The breeding lines have been developed and evaluated at locations throughout the country including North Carolina, Georgia and Florida. Quality, flavor and disease resistance were the initial priorities of this program. Brown says that he will continue evaluations throughout North Carolina, the fifth leading cabbage-producing state with a crop value of more than $14 million.

“A collaborative effort within the College of Agriculture and Life Sciences involving the Department of Horticultural Science, the Plants for Human Health Institute and N.C. MarketReady will include an outreach program with growers that will allow us to assess and prioritize needs in the coastal plains and the western regions of the state where most cabbage is produced,” he said. “We also plan to collaborate with fellow institutions and private industry to help make NCSU a leader in cabbage breeding.” “Monsanto is pleased to contribute cabbage germplasm to NCSU’s Plants for Human Health Institute at the NC Research Campus,” said Consuelo Madere, Monsanto’s Global Vegetable and Asia Commercial lead. “We sell cabbage seed under our Seminis brand in several world areas,” she said, “we are delighted that the Institute will be working at NCRC to develop cabbage varieties suited to the local production needs in North Carolina. It’s a great example of public and private efforts coming together at the campus.”

The NCSU **Plants for Human Health Institute** is part of the N.C. Research Campus in Kannapolis. The campus is a public-private venture including eight universities, the David H. Murdock Research Institute (DHMRI) and corporate entities that collaborate to advance the fields of nutrition and health. Learn more at [http://plantsforhumanhealth.ncsu.edu](http://plantsforhumanhealth.ncsu.edu). Monsanto Company is a leading global provider of technology-based solutions and agricultural products that improve farm productivity and food quality. Monsanto remains focused on enabling both small-holder and large-scale farmers to produce more from their land while conserving more of our world’s natural resources such as water and energy. To learn more about Monsanto’s business and commitments, please visit: [www.monsanto.com](http://www.monsanto.com).

At the end of 2010, CALS administration merged Plants for Human Health Institute (Research) and NC MarketReady (Extension). Both the NCSU Research and Extension faculty and staff at the research campus now are part of the Plants for Human Health Institute. As part of this, we have merged the separate websites into one. The new url is [http://plantsforhumanhealth.ncsu.edu](http://plantsforhumanhealth.ncsu.edu). For those of you who are accustomed to [www.ncmarketready.org](http://www.ncmarketready.org), this will now redirect to the new website. The Extension (N.C. MarketReady) section has all the resources to which you are accustomed, you'll just see the new Plants for Human Health Institute logo in the banner at the top of the home page instead of the N.C. MarketReady logo.

Thanks to our "Strengthening Markets -- Educating Farmers, Consumers" grant that was funded by the NC Tobacco Trust Fund Commission, we are sending "The Produce Lady" resource packets to every county. Each packet has a sampling of resources available for order: Fresh and Tasty from the Market Healthy Eating Guides, Children's Resources DVDs, Farmers Market Treasure Hunt Sheets, recipe cards, etc. The packet includes an order form for use to place orders for the materials.

We hosted a webinar on April 20, 2011 to share information about the materials available in the packets and on the website, and ideas for how to use them. Stay tuned for more information about the NC Strawberry Project on public radio stations, TV stations, and in newspapers and magazines across the state, during this strawberry season!
Field trials are underway, but are in desperate need for cooler temperatures. Pickle cucumber irrigation comparison trial harvests have begun, with great differences between methods. Economic considerations will be applied to the data at trial completion.

Mountain Horticultural Crops Research And Extension Center (Mills River)
Tom Ranney

It’s summer at the MHCREC and there is a constant whirlwind of activity. In addition to research, HS graduate students have been coordinating field trips and a journal club. Dick Bir, retired Extension Specialist, recently joined faculty and students at the Southern Highlands Reserve – a private native plant garden and research center dedicated to the preservation, cultivation and display of plants native to the Southern Appalachian Highlands. Pictures at: http://www.facebook.com/media/set/?set=a.229594337057260.76945.202329673117060&l=e09fc7cf89. Darren Touchell, Jason Lattier, and Irene Palmer are currently attending and presenting research at the Society for In Vitro Biology conference in Raleigh, NC. Kim Shearer, summer intern, is coordinating a research expedition to Gregory Bald in the Great Smoky Mountains National Park to study interspecific/interploid hybridization among sympatric azalea species.

Dilip Panthee is traveling in Nepal for most of June, 2011.

Vernon James Research and Extension Center (Plymouth)
Mark Clough

The time to harvest potatoes is approaching fast here in the Northeastern corner of the state. We expect to begin harvest on the 20th of June and continue into mid/late July. In test digs, the size has looked pretty good despite a lack of rain in the last month. Most of the growers will start harvest on or just before the week of the 12th of June. In addition to potatoes on the Tidewater Research Station, this is the 3rd year we have had sweetpotatoes with Craig Yencho and Nic George looking at industrial types. Also, Craig Yencho and Ken Pecota have a couple of trials in the black lands in Tyrrell County this year, looking at processing types.

The Last Clone Standing

The picture is NC385-18, a resistant clone in one of the Colorado potato beetle screening trials. Beetle pressure was heavy this year, and complete defoliation was achieved about two weeks earlier than usual but the clone in the picture held it’s own until the bitter end.
HORTICULTURE FACILITIES
John Dole and Todd Wehner

The university is continuing to remodel Kilgore Hall. Facilities Services has already started remodeling three laboratories on the ground floor and will be replacing ceiling tiles and lights in as many offices, laboratories, and classrooms as possible on the second and third floors. The process will be cumbersome, as many of the old ceiling tiles are made of asbestos and remediation will first need to take place.

Thanks to Helen Kraus and Dolores Lawson for their expertise in setting up the video conferencing capacity in Horticultural Science. Our system is now running and is fully operational. If you have need of video conferencing, please see Dolores in 120 Kilgore Hall, or call 919-515-1188 for information and scheduling.

ADDENDUM

How To Be A Spectator At Spring Planting
Robert Charles Benchley
(September 15, 1889 – November 21, 1945)
Henry Holt and Company, New York 1922

The danger in watching gardening, as in watching many other sports, is that you may be drawn into it yourself. This you must fight against. Your sinecure standing depends on a rigid abstinence from any of the work itself. Once you stoop over to hold one end of a string for a groaning planter, once you lift one shovelful of earth or toss out one stone, you become a worker and a worker is an abomination in the eyes of the true garden watcher.

A fence is, therefore, a great help. You may take up your position on the other side of the fence from the garden and lean heavily against it smoking a pipe, or you may even sit on it. Anything so long as you are out of helping distance and yet near enough so that the worker will be within easy range of your voice. You ought to be able to point a great deal, also.

There is much to be watched during the early stages of garden-preparation. Nothing is so satisfying as to lean ruminatingly against a fence and observe the slow, rhythmic swing of the digger’s back or hear the repeated scraping of the shovel-edge against some buried rock. It sometimes is a help to the digger to sing a chantey, just to give him the beat. And then sometimes it is not. He will tell you in case he doesn’t need it.

There is always a great deal for the watcher to do in the nature of comment on the soil. This is especially true if it is a new garden or has never been cultivated before by the present owner. The idea is to keep the owner from becoming too sanguine over the prospects.

“That soil looks pretty clayey,” is a good thing to say. (It is hard to say, clearly, too. You had better practice it before trying it out on the gardener).

“I don’t think that you’ll have much luck with potatoes in that kind of earth,” is another helpful approach. It is even better to go at it the other way, finding out first what the owner expects to plant. It may be that he isn’t going to plant any potatoes, and then there you are, stuck with a perfectly dandy prediction which has no bearing on the case. It is time enough to pull it after he has told you that he expects to plant peas, beans, beets, corn. Then you can interrupt him and say: “Corn?” incredulously. “You don’t expect to get any corn in that soil do you? Don’t you know that corn requires a large percentage of bi-carbonate of soda in the soil, and I don’t think, from the looks, that there is an ounce of soda bi-carb in your whole plot. Even if the corn does come up, it will be so tough you can’t eat it.”

Then you can laugh, and call out to a neighbor, or even to the man’s wife: “Hey, what do you know? Steve here thinks he’s going to get some corn up in this soil!”
The watcher will find plenty to do when the time comes to pick the stones out of the freshly turned-over earth. It is his work to get upon a high place where he can survey the whole garden and detect the more obvious rocks.

“Here is a big fella over here, Steve,” he may say. Or: “Just run your rake a little over in that corner. I’ll bet you find a nest of them there.”

“Plymouth Rock” is a funny thing to call any particularly offensive boulder, and is sure to get a laugh, especially if you kid the digger good-naturedly about being a Pilgrim and landing on it. He may even give it to you to keep.

Just as a matter of convenience for the worker, watchers have sometimes gone to the trouble of keeping count of the number of stones thrown out. This is done by shouting out the count after each stone has been tossed. It makes a sort of game of the thing, and in this spirit the digger may be urged on to make a record.

“That’s forty-eight, old man! Come on now, make her fifty. Attaboy, forty-nine! Only one more to go. We-want-fifty-we-want-fifty-we-want-fifty.”

And not only stones will be found, but queer objects which have got themselves buried in the ground during the winter-months and have become metamorphosed, so they are half way between one thing and another. As the digger holds one of these *objets d’art* gingerly between his thumb and forefinger the watcher has plenty of opportunity to shout out:

“You better save that. It may come in handy some day. What is it, Eddie? Your old beard?”

And funny cracks like that.

Here is where it is going to be difficult to keep to your resolution about not helping. After the digging, and stoning, and turning-over has been done, and the ground is all nice and soft and loamy, the idea of running a rake softly over the susceptible surface and leaving a beautiful even design in its wake, is almost too tempting to be withstood.

The worker himself will do all that he can to make it hard for you. He will rake with evident delight, much longer than is necessary, back and forth, across and back, cocking his head and surveying the pattern and fixing it up along the edges with a care which is nothing short of insulting considering the fact that the whole thing has got to be mussed up again when the planting begins.

If you feel that you can no longer stand it without offering to assist, get down from the fence and go into your own house and up to your own room. There pray for strength. By the time you come down, the owner of the garden ought to have stopped raking and got started on the planting.

Here the watcher’s task is almost entirely advisory. And, for the first part of the planting, he should lie low and say nothing. Wait until the planter has got his rows marked out and has wobbled along on his knees pressing the seeds into perhaps half the length of his first row. Then say:

“Hey there, Charlie! You’ve got those rows going the wrong way.”

Charlie will say no he hasn’t. Then he will ask what you mean the wrong way.

“Why you poor cod, you’ve got them running north and south. They ought to go east and west. The sun rises over there, doesn’t it?” (Charlie will attempt to deny this, but you must go right on.) “And it comes on up behind that tree and over my roof and sets over there, doesn’t it?” (By this time, Charlie will be crying with rage.) “Well, just as soon as your beans get up an inch or two they are going to cast a shadow right down the whole row and only those in front will ever get any sun. You can’t grow things without sun, you know.”

If Charlie takes you seriously and starts in to rearrange his rows in the other direction,
you might perhaps get down off the fence and go into the house. You have done enough. If he doesn’t take you seriously, you surely had better go in.

Departmental Newsletter Committee
Editors: Elaine Levin, Todd Wehner, Rachel McLaughlin
Send items for the newsletter to Todd Wehner (tcwehner@gmail.com) or to Elaine Levin (elaine_levin@ncsu.edu)