



N.C. A&T & N.C. STATE
Research Collaboration Meeting

PARTICIPANTS

C.H. Moore Agricultural Research Station

**NORTH CAROLINA AGRICULTURAL
AND TECHNICAL STATE UNIVERSITY**

GREENSBORO, N.C.

North Carolina State University

LUCY BRADLEY

Extension Specialist, Urban Horticulture
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PERSONAL HOBBY/ INTEREST: 9 Year old son; gardening

Lucy Bradley's interests are urban/consumer horticulture; home food production/edible landscaping; community gardening; environmental stewardship in the home landscape, including minimizing the use of insecticides and fertilizers, reducing green waste, storm water and soil management protection of pollinators and urban wildlife, and native plants. Her ongoing interest is in more effectively addressing these issues, and strengthening capacity to obtain funding.

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AMY CHILCOTE

Extension Associate, 4-H Youth Development & Family & Consumer Sciences
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PERSONAL HOBBY/ INTEREST: Traveling, reading, spending time with family

Amy Chilcote is the 4-H Curriculum Lead for North Carolina 4-H at NCSU. In this role, she manages the development of curriculum, as recommended by an established advisory board, for youth in K-12 that is holistic and has the ability to cross through 4-H delivery modes such as school enrichment, special interest, community club, and camping. She also facilitates partnerships with a diverse group of K-12 organizations, and works with NCSU

subject matter specialists to ensure that curriculum content is relevant. Current curriculum development that is connected to research includes a biofuels curriculum focusing on middle school science, a vertically aligned curriculum highlighting the research of food safety and microbiology, and a vertically aligned curriculum focusing on pollinators. Future research goals are to continue to assist departments to expand their research in the K-12/extension outreach arena so that we can create young citizen scientists.

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CARL R. CROZIER

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PERSONAL HOBBY/INTEREST: Enjoying the outdoors/ gardening, hiking, biking
Carl Crozier is interested in applying knowledge of basic chemical, physical, and biological properties of agricultural systems to achieve more efficient natural resource utilization. In his current position, his goal is to provide Cooperative Extension agents and farmers in eastern North Carolina with the best available information regarding soil fertility management to optimize crop production and minimize offsite impacts to the area's waterways. His projects deal with fertilizer and animal waste management for commonly grown and/or potential new crops for eastern North Carolina. He hopes to be able to provide an understanding of field agronomy principles to a multidisciplinary group studying new aspects of farming systems, with hopes of developing improved management recommendations. He is also interested in Extension activities that lead to enhanced

training opportunities for Cooperative Extension agents, other professional agronomists, and producers.

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JOHN DOLE

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PERSONAL HOBBY/INTEREST: NA

John Dole is head of the Department of Horticultural Science. The mission of the department is to provide innovative teaching, research and outreach in the art and science of horticulture. These programs encompass basic biology, genetics, ecology, production and utilization of horticultural products, including fruits, vegetables, nuts, herbs, and ornamental plants. Specifically, the department has concentrations of faculty working in floriculture, fruits, molecular genetics and biology, organic and sustainable horticulture, ornamentals/landscape, plant breeding, vegetables, and weed management.

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MITZI DOWNING

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PERSONAL HOBBY/ INTEREST: Reading, yoga, Pilates, running, chili cook-offs

Mitzi Downing serves as the NCSU/4-H Workforce Development & STEM coordinator; provides leadership to all federal and state 4-H reporting practices (ES-237, etc.), and teaches

in the FYD graduate program. In recent years, the NCSU STEM initiative has worked to align its entire core school enrichment (K-12) outreach programs to both the National Science Standards and the new Essential Standards (Common Core) utilized by the N.C. Department of Public Instruction. My interests in research would be projects relating to non-formal education and academic success, STEM programs for under-served and diverse populations, and working with differently-abled youth, including those with autism, Asperger's, and similar conditions. Specifically, Downing is interested in collaborating with researchers on projects addressing behavior changes in school-age youth from low-income families, low-income adult interventions that combine behavior and environmental changes, and assessment of educational curricula to meet the evidence-based criteria. She is also interested in evaluating training and educational strategies.

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ADAM FAHRENHOLZ

Postdoctoral Research Scholar
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Adam Fahrenholz' research generally involves feed processing and the impact of manufacturing variables on both equipment and facility efficiency and animal performance. Research is conducted involving all areas of feed processing, including ingredient and feed additive evaluation, and the grinding, batching and mixing, pelleting, and post-pellet liquid application processing centers. My goals are to optimize the relationship between feed manufacturing costs and live production, and to leverage the abilities of the feed mill to improve overall animal performance. The NC State Feed Mill Education Unit has worked with N.C. A&T to manufacture research feeds for several experiments. His goal in expanding upon this relationship through the

development of collaborative activities is to promote a greater involvement and understanding of the feed manufacturing process in production animal research.

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ALEXANDRIA K. GRAVES

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PERSONAL HOBBY/INTEREST: Reading, Decorating

Alexandria Graves' research program is driven by the increasing need for measures to address microbial contamination in soil and water supplies. Research efforts involve: determining sources of enteric microorganisms in soil and water environments; and investigating the fate and transport of enteric microorganisms in the environment. Other efforts include evaluating the diversity of antibiotic resistance genes in enteric bacteria. She has described results associated with an agricultural setting in her paper, Distribution of ten antibiotic resistance genes in *E. coli* isolates from swine manure, lagoon effluent and soil collected from a lagoon waste application field. Similarly, she has described results associated with urban settings in a paper that she co-authored, Genetic diversity and antimicrobial resistance of *E. coli* from human and animal sources uncovers multiple resistances from human sources. Food safety and pathogen control have become a central concern in modern food science due to outbreaks of foodborne illness. Future efforts will focus on the molecular detection of pathogens associated within food matrices, such as fresh produce. The molecular methods she and others use are described in her publication, "Food Safety and Implications for Microbial Source Tracking" in the book, Microbial Source Tracking: Methods, Applications and Case Studies, published by

Springer. Graves says, "I hope that collaborative ventures with N.C. A&T faculty will ensure more effective use of individual talents, given that research often requires a wide range of skills that no single individual possesses."

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FRED GOULD

William Neal Reynolds Professor
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Fred Gould is interested in the interface of genetics and society, and would like to develop collaborations with biologists, social scientists and humanities faculty. This link provides additional information <http://geneticengsoc.ncsu.edu/>

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NICHOLE L. HUFF

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PERSONAL HOBBY/ INTEREST: Having fun with my 6 & 4 year olds

Nichole L. Huff joined the Department of 4-H Youth Development and Family and Consumer Sciences in December 2012, and she is currently an assistant professor and Extension specialist. In addition, she is a Certified Family Life Educator (CFLE) with the National Council on Family Relations. As a new faculty member at NCSU, Huff is interested in forming interdisciplinary, collaborative networks with other professionals across the state. Her research interests include child and youth development; interpersonal and

parent-child communication; and biopsychosocial health. Huff says, "Given that children are subsystems of larger family and societal units, the wide-ranging effects of biopsychosocial impacts (i.e., one's biological, psychological, and social domains) are exponentially and systemically experienced. As a human development specialist, a collaborative venue such as this would foster my participation in multidisciplinary research efforts and joint funding opportunities across other disciplines that may be interested in including child and family perspectives.

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LORELEI JONES

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PERSONAL HOBBY/INTEREST: Gardening.

Lorelei Jones interests' in research are in projects relating to community nutrition education interventions. Specifically, she is interested in collaborating with researchers on projects addressing behavior changes in school-age youth from low-income families; low-income adult interventions that combine behavior and environmental changes, and assessment of educational curricula to meet the evidence-based criteria. She is also interested in evaluating training and educational strategies. Currently, she is involved in a research project called Voices into Action through the EFNEP program. The project is funded by USDA through AFRI funds, and is conducted in partnership with the Department of Sociology and with the N.C. A&T State University Cooperative Extension Program. It is designed to assess the influences of the environment and educational intervention on obesity risk in families with young children.

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IVAN KANDILOV

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SLAVKO KOMARNYTSKY

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PERSONAL HOBBY/INTEREST: NA

Slavko Komarnytsky has a broad research interest in the role of diet and nutrition in the prevention of chronic metabolic diseases and inflammation, with a specific emphasis on the pathological mechanisms of insulin resistance

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R. MICHAEL ROE

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PERSONAL HOBBY/ INTEREST: Entomology

R. Michael Roe, Ph.D., is recognized for his research in insect and acarine physiology, biochemistry, genomics and toxicology and the use of fundamental research in chemistry, nuclear science and biology to solve practical problems and develop new commercial technologies. Roe's laboratory focuses on understanding how insect and acarine systems function at the molecular level, the use of synthetic organic chemistry to

understand structure-activity, and applications in bioassay, chemistry, molecular biology, and physics to solve practical pest problems in the context of integrated pest management. His lab is especially active in technology transfer and product development. Some of his successes include an EPA-registered insect and tick repellent more effective than DEET, and a fast acting, natural broad spectrum herbicide. His greatest passion is mentoring students, postdocs and young faculty for careers in science.

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SANDY STEWART

Director

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PERSONAL HOBBY/ INTEREST: I try to operate a small farm in my spare time, which is limited.

Sandy Stewart serves as director of the research stations for NCSU and NCDA. He is interested in opportunities that will result in the utilization of research stations for good quality and relevant research. His personal research interest is in cotton and tobacco production and whole-plant physiology. and muscle loss. In addition, he is interested in biodiscovery from microbial resources and microbial diversity, and their impacts on water.

North Carolina A&T State University

FLETCHER BARBER, JR.

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MISTY BLUE-TERRY

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PERSONAL HOBBY/ INTEREST: Outdoor activities and leisure reading

Dr. Terry is the 4-H STEM Specialist on the campus of North Carolina Agricultural and Technical State University. Her educational background is in Industrial and Systems Engineering and Human Factors Engineering. Her current STEM related programming involves robotics, basic engineering and design principals, and GIS/GPS applications. She has recently received funds to develop a youth workforce development program focusing on technical and soft skills needed to succeed in STEM careers. Her overall goals are to help broaden the reach of 4-H and STEM in under-represented communities and to target girls for science programs. In addition, she is interested in developing research based STEM related programs for younger children (ages 5 – 8).

Dr. Terry believes that good collaborations make all programs stronger. She hopes to achieve a comprehensive STEM program in the state of North Carolina that delivers meaningful impacts on the lives citizens of each county within the state.

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GUIBING CHEN

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PERSONAL HOBBY/ INTEREST:

Guibing Chen's current research activities in the Center for Excellence in Post-Harvest Technologies at the North Carolina Research Campus in Kannapolis include high-fiber extruded cereal and bakery products, micro- and nano-encapsulation of nutraceuticals and antimicrobials, and predictive microbiological modeling. In addition, he is also interested in thermal processing of canned foods and mathematical modeling of food processes. He holds a Ph.D. in food process engineering from Purdue University.

"I hope to collaborate with NCSU faculty members to create project proposals in areas of mutual interest," Chen says.

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MICHELLE ELEY

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PAULA FAULKNER

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PERSONAL HOBBY/INTEREST: Travel, shopping, attending sporting events

Paula Faulkner's research interests relate to education; namely, teacher education. Her primary research emphasizes working with pre-service teachers/teacher educators to assist them with identifying the tools needed for managing the classroom for students with disabilities. Her future plans are to explore the beliefs of Career and Technical Education (CTE) educators concerning their thoughts related to instructing students with learning disabilities, especially those identified as gifted and talented. Other research interests include: Diversity/multicultural education and experiential learning. "I am interested in learning more about the gifted and talented due to limited research in CTE," she says, adding, "I am also interested in promoting healthier lifestyles for adolescents. Each of these research interests can be easily transferred from the secondary to postsecondary setting as more information and training is being offered to work with individuals with disabilities or those underrepresented in educational or professional settings. As an educator, I am very concerned with being a lifelong learner to provide all students with the necessary tools to be successful in life. This is the reason for my new research interest related to experiential learning. Collaborative work will allow me to learn from other experts in the field and increase my research efforts."

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GODFREY GAYLE

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PERSONAL HOBBY/ INTEREST: walking, movies, playing dominoes

Godfrey Gayle's primary interest is in the area of soil and water conservation with an emphasis on water management, irrigation and drainage.

The goal of his research is to develop or modify low cost irrigation systems to enhance the sustainability of limited resource farmers by improving yield on small acreages, and to extend growing season under high tunnels.

Another area of interest is in watershed and drainage modeling, including DRAINMOD and SWAT. "I have an interest to evaluate or modify current delivery or transfer of technology to provide easy/ready access to end users especially small size farmers," Gayle says.

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SANJUN GU

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PERSONAL HOBBY/INTEREST: Fishing, Gardening/Farming

I started my current job about 6 months ago, moving from Missouri where I was the State Vegetable Specialist. My research interests include season extensions of strawberry and vegetable crops, variety evaluations of field vegetables, and small fruit production. My projects would cover both organic and conventional fields. I also promote community gardening at the consumer horticulture side. My current research projects include organic strawberry production, development of a calendar for high tunnel vegetables, seedless cucumber grafting, new tomato rootstocks evaluation, soil fertility of high tunnel tomatoes, and organic high tunnel bell peppers. I hope to collaborate with NCSU colleagues who share similar research and extension interests in the future and learn from them the

resources pertinent to North Carolina's horticulture industry. My goal is to develop a strong extension and research program that addresses small, limited resource farmers' needs and increase their farm income.

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SALAM A. IBRAHIM

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Salam Ibrahim is a research professor in the Food and Nutrition Sciences Program, with a research interest in food microbiology and biotechnology. Courses he teaches including Food Microbiology, Food Safety, Food Biotechnology, Food Defense/Protection, Experimental Foods and other related courses. His research program focuses on dairy food processing; fermentation and probiotic cultures, and food safety/microbiology and protection. Ibrahim also serves as faculty coach for the dairy products evaluation team at the University.

Ibrahim says, "I am very much interested in establishing active collaboration with NCSU, both on research and teaching levels."

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LOUIS JACKAI

Chair, Department of Natural Resources and Environmental Design
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PERSONAL HOBBY/ INTEREST: Spending time with the family – traveling or at home

Louis Jackai's background is in insect-plant interactions as a function of integrated pest management systems, and his current research focuses on the feeding behavior and nutritional

ecology of Hemipteran pests (particularly the Pentatomidae) of peas and crucifers, especially collards; and the application of this knowledge to the management of these pests under different ecological settings. Jackai is also interested in the use of alternative approaches to synthetic pesticides in pre- and post-harvest systems from a food safety and system sustainability perspective, with the longer term goal of understanding their role in the food system as a whole.

Jackai has on-going projects in the IPM of vegetable crops in the small farm environment. His current focus is on addressing the specific pest management needs of the small grower in urban and rural communities, whose pest management needs have often been a diminutive subset of the prescriptions for large commercial production.

"One exciting area we are looking at is the ecological interactions of trap cropping and biodiversity on the farm," Jackai says, adding, "The application of emerging technologies in what we do is something that continues to interest me, especially as we train the agricultural scientists and leaders for the future."

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KENRETT Y. JEFFERSON-MOORE

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PERSONAL HOBBY/INTEREST: NA

Kenrett Jefferson-Moore's current research interests include the marketing of alternative commodities; markets for nutritionally enhanced and organic products; and the economics of infectious and non-infectious diseases in crops and livestock. Here academic

credentials include a B.S. in Agricultural Economics from Southern University and A&M College in Baton Rouge, Louisiana; an M.S. from Alabama A&M University and a Ph.D. in Applied Economics from Auburn University.

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SUNG-JIN LEE

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PERSONAL HOBBY/ INTEREST:

Traveling/volunteering

Sung-jin Lee is a housing researcher, concentrating on housing options for older adults related to aging-in-place; housing environments for an aging society; housing policies; and housing/social issues focusing on minorities, community, and living environments. Lee's research activities have involved developing conceptual models, conducting empirical studies, producing professional publications and presentations, and preparing grant proposals, all with an interdisciplinary approach. She is currently principal investigator for a project focusing on assessing strategies utilized by North Carolina elderly homeowners to age in place, with a particular emphasis on older, limited-resource homeowners. She is also continuing to investigate how the 2009 recession impacted U.S. consumers' living environments, using the American Housing Survey from the U.S. Housing and Urban Development Agency. Lee's academic credentials include an M.S. and Ph.D. from the housing program at Virginia Tech in 2006 and 2010, respectively, and a Graduate Gerontology Certificate from the Center for Gerontology at Virginia Tech in 2010. Lee says, "I plan to identify community needs, and continuously develop and conduct research for vulnerable populations, particularly collaborating with other individuals and groups who have similar interests."

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RAY MCKINNIE

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SHEWANA MCSWAIN

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PERSONAL HOBBY/ INTEREST: Physical activity, reading, cooking and watching television

As nutrition outreach coordinator, I'm looking to be involved in research that would benefit limit resource participants regarding food, nutrition and health.

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RALPH NOBLE

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PERSONAL HOBBY/INTEREST: NA

Ralph Noble's specialty is reproductive physiology, and his research interest is in the use and application of reproductive technology to improve reproductive efficiency of farm animals. He also has an interest in improving food security and food safety through on-farm management practices as well as developing strategies to overcome parasitism in small ruminants.

Noble says, "I am hopeful that through this collaborative venture I will be able to partner with colleagues at North Carolina State University to develop joint research and/or outreach programs that will improve our capacity to acquire funding and expand our impact in animal agriculture throughout North Carolina and the southeastern United States."

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SANG-HYON OH

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Sang-Hyon Oh's research interest is statistical animal breeding, or genomic selection; and sustainable, outdoor pig production. He has been working on crossbreeding research into outdoor swine production since 2006 with the support of the USDA SARE of the Southern Region. The three thrust areas of the project are: 1) comparing meat quality of heritage crossbreds produced with different sire lines; 2) analyzing the growth characteristics for heritage crossbreds to be raised in hoop barns; and 3) determining which of four vegetation types would continue to protect the soil when gestating sows have access for grazing and lounging during the gestation period. Growth performance of crossbreds with Berkshires and antibiotic-free Yorkshires has been studied in the alternative outdoor hoop system. Forage preference and durability of ground covers also has been investigated with gestating sows in outdoor paddocks.

Oh says, "One of my research interests is to improve the existing optimal inbreeding theories or to suggest a new algorithm. On-going research works are genomic selection for Berkshire reared in the hoop based on single nucleotide polymorphisms data. As such, the long-term goal of my research is to develop marker assisted selection of economically important traits for sustainable alternative production systems controlling inbreeding."

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CHARLES RACZKOWSKI

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PERSONAL HOBBY/ INTEREST: Research areas of interest: Soil Conservation, Soil & Water Quality, Soil Management

Raczkowski's research has focused on soil management and conservation techniques for improved soil and water quality. Since 1998, he has collaborated with researchers from NCSU in various projects in the Farming Systems Research Unit (FSRU) at the Center for Environmental Farming Systems (CEFS), Goldsboro, NC. Currently he is monitoring drainage and ground water quality in the FSRU and plans to expand his research to include all systems under study. He has been involved in research that relates to soil carbon dynamics with particular emphasis on the management of soil to increase carbon sequestration and retention. He would like to collaborate with other researchers in projects that focus in Piedmont small scale vegetable production systems, including urban production systems.

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GUDIGOPURAM B. REDDY

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PERSONAL HOBBY/ INTEREST: NA

Reddy's research for the past 30 years include measuring nitrogen fertilizer efficiency and nitrogen fixation in cropping systems in the Piedmont region of North Carolina, and in African countries such as Zambia and Zimbabwe. He has conducted research to establish the relationship between nutrients,

soil enzymes and acid rain. In the last ten years his research was devoted to swine wastewater pollution, and therefore developed the constructed surface flow wetlands on the N.C. A&T farm to treat swine wastewater to reduce the nutrients and sequester carbon. He has developed a technology using a geotextile bag to remove solids and other adsorbents to further clean wastewater. Currently, Dr. Reddy is engaged in developing the methodology to fractionate the carbon in different soil with different cropping systems. He is also working on biochars from different feed materials to improve soil quality and reduce nutrient leaching and runoff.

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MANUEL REYES

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Manuel “Manny” Reyes, is a professor of biological engineering. Through funding provided by the U.S. Agency for International Development, he leads an agroecological engineering research project in Southeast Asia focused in agroforestry and conservation agriculture.

Reyes grew up in the Philippines, totally unconcerned with biodiversity. He vividly remembers enjoyment in shooting beautiful tropical birds in Busuanga Island while collecting their eggs and hatchlings. He had several hatchlings of the critically endangered Philippine parrot and the Blue-naped parrot. At the time, he regretted not having a Kilit hatchling because locals do not know where it nests. His vision then was to convert forests in Busuanga into monoculture agricultural land. Now, his vision has turned 180 degrees in the opposite direction. He helped start Kingfisher Park, and the Kilit that he once so passionately hunted, he is now fighting to conserve.

Furthermore, he envisions turning the island of Busuanga into an ecoagriculture model.

In the United States, thanks to funding provided by the EPA and USDA, Reyes and his students started ‘natuculture,’ a conservation practice that mimics nature in human disturbed landscapes, such as a typical college campus. At the N.C. A&T campus, Reyes and his students ‘natucultured’ a typical turf grass lawn, transforming it into a vibrant, chemical-free ecosystem with at least 150 flora that is now visited by birds and other fauna.

“We dare say that this place can be the coolest student pesticide free hangout on campus,” Reyes says, adding, “We are actively spreading ‘natuculture’ in several high school campuses in North Carolina, where we are establishing ‘hands-on’ biologically engineered systems that help us learn how to improve soil health while producing chemical-free vegetables and promoting biological diversity in urban areas. At the same time we are engaging high school students in the science, technology, engineering, and math professions.”

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SHENGMIN SANG

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PERSONAL HOBBY/INTEREST: Playing ping-pong

Shengmin Sang’s research goal is to identify bioactive components from functional foods and herbal medicine to prevent chronic diseases, such as cancer and diabetic complications. His laboratory at the Center for Excellence in Post-Harvest Technologies at the North Carolina Research Campus in Kannapolis has expertise in the following areas: 1)

purification and identification of bioactive components from functional foods and herbal medicines; 2) determining the biotransformation and bioavailability of the bioactive food components in cell cultures, in rodents and in humans; 3) studying the *in vivo* efficacy and underlying molecular mechanisms of bioactive food components for prevention of cancer and diabetic complications; and 4) investigating how post-harvest technologies, such as thermo processing, storage, fermentation, and packaging, affect the stability, bioavailability, and efficacy of the bioactive components in functional foods.

“My future goal is to develop functional food products for human use,” Sang says.

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ABOLGHASEM SHAHBAZI

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PERSONAL HOBBY/ INTEREST:

Gardening/hiking

Abolghasem “Ghasem” Shahbazi has approximately 20 years of experience with bioenergy and bioprocess engineering research. This includes production of biofuels such as ethanol through fermentation of various food processing wastes, crop residues, and woody biomass. He is also involved in value added product development such as organic acids and biodegradable plastics. He is author or co-author of more than 50 research publications, and was the recipient of the Senior Researcher Award from N.C. A&T in 2006. He is also the recipient of two distinguished paper awards from the Association of Research Directors in 2006 and 2008. In addition, Dr. Shahbazi has been active in international development. He has conducted renewable energy trainings and

workshops in Brazil, Egypt, Jamaica, Senegal and South Africa. He is a member of American Society for Agricultural and Biological Engineers (ASABE); is former chair of the North Carolina Sustainable Energy Association, an advocacy group, and has served for two-years (2006-2008) as a convening board member for the Biofuels Center of North Carolina. He is now serving as a member of the U.S. Department of Energy’s Technical Advisory Committee (TAC) of the Biomass Research and Development Initiative (BRDI). Shahbazi has served on review panels for the EPA, USDA, and the Department of Energy. Currently, he is serving as the Director of the NSF-CREST Bioenergy Center at N.C. A&T. Dr. Shahbazi received his bachelor’s in agricultural engineering from Tabriz University in Iran (1974), his master’s in agricultural engineering from the University of California at Davis (1978) and Ph. D. in agricultural engineering from Penn State (1982).

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SEKAI TURNER

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PERSONAL HOBBY/ INTEREST: NA

As a youth development specialist, Sekai Turner’s research interests include the intersection between gender and health, juvenile delinquency prevention, academic and career development, school and community partnerships. A current project includes an examination of the impact of mentoring on reducing juvenile delinquency, enhancing school success and family support within Native American, African American and populations living in limited economic circumstances. In 4-H, there is interested in collaboration building to assist in the area of healthy living curriculum development with particular emphasis on preventive, accessible, developmental and culturally relevant.

LIJUN WANG

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PERSONAL HOBBY/ INTEREST: Bioprocess engineering & bioenergy technologies

Lijun Wang's research interests are in bioprocess engineering and bioenergy technologies. He is interested in pursuing research collaborations in: 1. Microalgae cultivation and processing; 2. biomass-to-bioenergy technologies, and 3. value added processing of agricultural and food wastes.

JENORA WATERMAN

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JOHNNIE WESTBROOK

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NIKI WHITLEY

Cooperative Extension Program
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336-285-4684

PERSONAL HOBBY/PERSONAL INTERESTS:
horses, cattle

Niki Whitley's research and Extension interests include: 1) A systems/holistic approach to livestock production – including understanding how best management practices within a system may impact marketing, economic viability or the environment. Practices and interactions of these practices, to investigate may include: breeds, breeding, genetics and stock selection; feed, feeding, forage selection and management; crop, soil management and health; natural resources and environment; agroforestry practices; integrated parasite management; farm profitability; animal health, and how these factors impact product marketing, especially locally. 2) Livestock integrated parasite management, with investigations that may include economic impact, cost of untreated or resistant parasitism in cattle, pigs, sheep, goats, horses; calculators for impact of best management practices; avoiding anthelmintic resistance in pigs on pasture and recommendations for more sustainable practices and work on genetics, molecular biology and immunity.

Whitley says, "As the CEFS Alternative Swine Unit Coordinator and Coordinator of the A&T Small Ruminant Demonstration Site at the Upper Piedmont Research Station, I see ample opportunity for collaborative work. As an Extension specialist, applied projects with impact assessment and outreach efforts are easiest, but collaboration for basic work with an applied possible future outcome is also intriguing. Collaborative research, grant writing, and communication during the project are a major interest and focus."

LEONARD L. WILLIAMS

Interim Director
Center for Excellence in Post-Harvest Technologies
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704-250-5703

PERSONAL HOBBY/ INTEREST:

Running/reading war novels/RC Helicopters

Leonard Williams' laboratory at the Center for Excellence in Post-Harvest Technologies at the North Carolina Research Campus in Kannapolis focuses on isolation and molecular characterization of foodborne pathogens isolated from food, clinical, and veterinary samples. His team has an interest in understanding the mechanisms of antimicrobial resistance and utilizing alternative methods to combat antimicrobial resistant strains of foodborne pathogens isolated from environmental samples. In addition, his laboratory has a research interest in molecular epidemiology and surveillance of multi-drug resistant bacteria (MRSA, CRE, VRE, etc.) and how these microorganisms might respond to environmental stressors, processing, and sanitizers.

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MEESHAY WILLIAMS-WHEELER

Department of Family and Consumer Sciences
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336-285-3634

PERSONAL HOBBY/ INTEREST: playing piano, listening to music, spending time with my family

Meeshay Williams-Wheeler is a certified family life educator and associate professor of child development and family studies. Her research agenda includes studying family dynamics and how cultural beliefs and practices influence social and emotional well-being of African American children. She also has a strong interest in the interdisciplinary approach of familial influences of nutrition, health, and physical activity on the development of African American children. Williams-Wheeler is currently principal investigator on two research projects. One is a study funded

through the USDA Evans-Allen Program that focuses on the sociocultural influences of dietary habits of African American families living in rural communities. The other is a USDA Capacity Building grant designed to educate college students about developmentally-appropriate ways to teach young children about nutrition and gardening.

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ABRAHAM WOLDEGHEBRIEL

Department of Animal Sciences
107C Webb Hall
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336-285-4782

PERSONAL HOBBY/ INTEREST: Soccer and tennis

Woldeghebriel is an animal nutritionist with training, experience and keen interest in improving bioavailability of nutrients to animals through dietary manipulation and/ or enhanced functionality and health of animals.

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MULUMBET WORKU

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Professor
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GUOCHEN YANG

Natural Resources & Environmental Design
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PERSONAL HOBBY/INTEREST: NA

Guochen Yang's expertise is in plant tissue culture and micropropagation. His research interests include using micropropagation and tissue culture techniques for economic

development, rescue of endangered species, propagation of rare species, and rapid multiplication of plant species with high economic value. Other areas of interest include application of tissue culture techniques for secondary production of phytomedicines and nutraceuticals through somatic embryogenesis and organogenesis, and genetic transformation. Currently, his research laboratory is focused on tissue culture and micropropagation related to plant quality and production improvement, forest farming and inter- and alley-cropping, and finding alternate ways to increase production and profitability for stakeholders.

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ANTHONY YEBOAH

Chair, Department of Agribusiness, Applied Economics and Agriscience Education
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PERSONAL HOBBY/INTEREST: Soccer/gym

Anthony Yeboah's research interest focuses on finding ways to improve the economic viability of small-scale farms in North Carolina. One of his recent projects identified enterprise diversification, love-of-farming, and risk management strategies as the driving forces behind success and survival of small scale farms in the state. The project indicated that the adoption of value added processing, niche marketing and enterprises that generate incomes can significantly impact economic viability of small farms; and that diversifying farm operations creates a greater opportunity for year-round income, and can contribute to the success of farm business. His ongoing research analyzes the economic feasibility of growing canola on marginal lands as a biofuel feedstock, in order to provide additional income to small farmers without competing with corn production. His future research is along similar lines of enterprise diversification through the addition of agritourism operations to the farming enterprise. Yeboah says, "I hope

this collaborative venture will lead to networking with my colleagues, both on campus and at N.C. State, in the overall area of enhancing the economic viability of small farmers in North Carolina."

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JIANMEI YU

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