

**SOUTHERN UNIVERSITY  
AGRICULTURAL RESEARCH AND EXTENSION CENTER**



**Leodrey Williams**

**CHANCELLOR'S REPORT**

**Presented to:**

**Board of Supervisors**

**Southern University and A & M College System**

*"Linking Citizens of Louisiana with Opportunities for Success"*

**February 2012**

**Number 243-63**

*Southern University Ag Center*

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On August 19, 2011, Drinkable Air published its First Quarter Report featuring the performance evaluation of Chameleon 60 Atmospheric Water Generator conducted by researchers at the Southern University Research and Extension Center.

Upon request from Drinkable Air Technologies for equipment evaluation, the Southern University Ag Center conducted a performance test from June to August 2011. The major goal of the company is to improve our environment with new technologies at affordable prices. Hence, the company designed and developed the Atmospheric water generator (AWG) Chameleon 60 that generates water from the humidity in the air, condenses, processes and purifies it into clean drinkable water. This environmentally friendly method of water supply has great potential to serve as an alternative method of water supply for humans as well as animals and plants, provided it is cost-

effective compared with other sources of water generators.

The system eliminates bacteria and purifies the water with an ozone process, which oxygenates the water. The potential will have high international demand particularly in developing countries with scarce drinkable water supply and during humanitarian relief situations.



**Water Generator Machine at SU Ag Center**

This study is limited to quality and quantity of water production and does not include mechanical and electrical issues that affect the equipment's reliability.

The objective of the study was to perform equipment performance test on the equipment with respect to quantity and quality of water produced and electric usage in terms of KWH consumed.

Performance test of Chameleon 60, AWG was carried out in Baton Rouge at the Southern University Ag Center campus. The unit was delivered by Drinkable Air Technologies (DAT) to Southern University Agricultural Research and Extension Center (SUAREC) on June 6, 2011.

The equipment was placed on level concrete blocks and was connected to 220 volts electrical box and meter to measure the electric usage (KWH) for water production. Volume of water produced and KWH consumed were measured at different intervals (5 min, one hour, 12 hours and 24 hours). Daily hourly temperature and relative humidity were obtained from the Southern University weather station located approximately 300 ft away from the equipment. Water was collected in a graduated cylinder and 5 gal containers. For water quality analysis, filtered and unfiltered water samples were collected and analyzed at the Calligary Environmental Center.

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## Drinkable Air

The summary results of the water quality analysis obtained from the Calligary Environmental Center focused on the performance evaluation of the Atmospheric Water Generator, Chameleon 60. The machine was rigorously tested and evaluated based on its water production capacity and electrical usage. Several additional improvements were made to the equipment during the course of the test. For the period between June and August 2011, the AWG, Chameleon 60 had the capacity to produce up to 77 gallon of water in 24 hours under Baton Rouge weather conditions.

Because of lower temperature and higher humidity at nighttime, the unit produced more water efficiently at night than daytime.

It was not possible to test the unit at lower humidity than 53%. Hence, it was recommended that the equipment be tested at lower humidity regions as well. Mathematical models that predict the water production as a function of humidity and temperature were developed. Water quality test results showed it was within the acceptable range levels. Since this way of atmospheric water harvesting has great potential for wide agricultural use, all research efforts will be made to explore other sources of energy besides electrical power to run the machine.

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The final report for the performance evaluation of Chameleon 60 Atmospheric Water Generator was generated by Yemane Ghebreyesus, Professor, plant science, Roosevelt Payne, Research Associate and Mila Berhane, Senior Research Associate on December 3, 2011.

For the full report, contact Dr. Yemane Ghebreyesus at yemane\_ghebreyesus@suagcenter.com, 225-771-2242 or visit <http://www.drinkable-air.com/>

### BROWN NAMED EXECUTIVE VICE CHANCELLOR AND VICE CHANCELLOR FOR RESEARCH

Dr. Adell Brown, Jr., Vice Chancellor for Finance and Administration, SU Agricultural Center, has been named Executive Vice Chancellor and Vice Chancellor for Research at Southern University Agricultural Research and Extension Center. Dr. Adell Brown will replace Dr. Kirkland E. Mellad who retired from the position of Vice Chancellor for Research on December 31, 2011. Additionally, Chancellor Leodrey Williams formally appointed Brown to be the official designated person in charge in his absence.



**Dr. Brown**

During his initial meeting with the faculty on January 10, he informed them that his vision is for the Southern University Ag Center to become a major partner in providing innovative new discoveries to help drive the economic development in the state of Louisiana.

“Average is over, we have to outperform and increase productivity in order to survive,” Brown said.

## SMALL RUMINANT ACE MEETING HELD AT SU AG CENTER

The annual small ruminant Ag Center Exchange (ACE) group met on December 15, 2011 at Efferson Hall, on LSU campus. The purpose of the meeting was to review and discuss small ruminant research and extension activities and to identify critical program needs for the future.

Professor Sebhatu Gebrelul, Animal Science, Associate Professor Renita Marshall, Animal Science, Professor Yemane Ghebreyessus, Urban Forestry, Lisa Gray, Research Associate, Eugene Runles, Farm Superintendent, and Linus Harleaux, Assistant Research Farm Superintendent, represented the Southern University Ag Center.

After a brief welcome and introductions by Dr. Jim Miller, Chair of the ACE group, Dr. Gebrelul reported the status of the *“Sustainable forage management practices through intensive sequential grazing system for cattle and goat production”* and discussed the goal, objectives and current activities.

Gebrelul also identified two pending projects; (1) *A systematic study of novel food pathogens, safety practices of small farmers, small processors and emerging markets for small ruminants*, AFRI/USDA and (2) *Mitigation of greenhouse (GHG) emissions in southern integrated beef-pasture system*, AFRI/USDA (Scaglia, G., LSU Ag Center, New Iberia) that the goat unit is collaborating in.

On behalf of Dr. F. Malekian, who was unable to attend the meeting due to other official engagement, Dr. Gebrelul also reported the goal, objectives and activities of the Capacity Building Grant entitled *“Nutritional content, antioxidant activity and safety of value-added goat meat products”*.

The Small Ruminant ACE agreed on the need for research to provide producers with information on improved practices to increase forage yields, species and varieties of clovers and stocking rates.

## SMALL FARMER AGRICULTURAL LEADERSHIP TRAINING SESSION HELD IN HOUSTON

The Southern University Ag Center-based Small Farmer Agricultural Leadership Institute held its second training session at Prairie View A&M University in Houston, December 14-17. The group consisting of 31 attendees from 12 southern states came together for farm tours and classroom lectures.

The first stop was Yonder Way Farm, which began in 2006, when owners Jason and Lynsyn Kramer decided to live out their dreams of owning a farm.



**Tour of the Yonder Way Farm**



Their business goal is to be good stewards of the land by raising their animals free of confinement in a natural environment.

Classroom lectures included lessons such as team building, leadership, diversity, farming as a business, and creating a resource inventory.

## SU AG CENTER STAFF ATTEND ANNUAL QUAD AREA EVENT

On December 15, 2011, Eual Hall, Business Development Specialist, and Wilbert Harris, Technical Support Specialist, Center for Rural and Small Business Development participated in the annual Quad Area Head Start Christmas Activity in Jackson, Louisiana. The aim of the event was Head Start children and their parents. More than 89 parents and 50 children were available for the program.

The Ag Center staff set up a booth to display information about our Center, including activities used to assist communities to improve the quality of education; small business owners in starting small businesses; promoting USDA/Rural Development programs and other rural development initiatives.



**Event participants at the computer training session**



The USDA, Rural Development program Director, Monica Griffin and her staff expressed appreciation for Southern University's presence and being prominently featured in the event, especially for the Mobile Computer Technology availability to event participants.

Many adults visited the mobile technology RV to see how it operates onsite, assisting with training for children, and adults, small business owners, small farmers, and other organizations. In bringing this mobile distance learning technology to the community and citizens of East Feliciana Parish, the SU Ag Center hopes to create impact by improving education and enhancing economic development.

## YES Youth Celebrate the Season

Members of the Youth Educational Support (Y.E.S.) club visited the St. Helena Parish Nursing Home in December. The youth recited poems, sang Christmas Carols, and gave the residents fruits for a healthy snack. The youth also danced to the tune of "Silent Night." Angela Myles, St. Helena Parish Agent, SU Ag Center and Mrs. Addison, Health teacher at St. Helena Central Elementary supervised the event.



**YES club members entertain nursing home residents**



**YES club members interact with nursing home residents**

## THE SU AG CENTER ENHANCES TRAINING OF FUTURE SCIENTISTS

The Southern University Ag Center has been sponsoring graduate research in urban forestry and agriculture for the past 10 years. Recently, two graduate students who conducted their research at the Center have graduated from SUBR and are employed at the Ag Center. They are Vanessa Ferchaud, Ph.D., Urban Forestry and Michaela Danzy, M.S., Urban Forestry, December 2011 graduates. Professor Yadong Qi served as their major advisor/professor. Qi is a joint scientist at SUBR and SU Ag Center.

Dr. Ferchaud's research yielded a dissertation entitled "Localization and identification of Flavonoids/phenolics in selected southern tree species relative to Ultraviolet -B protection."



L-r: Ferchaud, Qi and Danzy

"The research done by Dr. Vanessa has contributed new knowledge that enables us to have a better understanding of UV-B tolerance mechanism in Southern trees. Such information is useful for tree selection and forest management in forestry and urban forestry, as we continue to face the uncertainty in global climate change patterns," said Dr. Qi.

Danzy's research produced a thesis entitled "The effects of copper-carbon core-shell nanoparticles on three blue-stain fungi."

"Ms. Michaela's research has opened a brand new face of using nanotechnology to combat forest diseases," Qi said

Dr. Qi also stated that the research has explored the feasibility and effectiveness of the copper-carbon core shell nanoparticles in controlling blue stain fungi that are the major diseases causing death in southern pine.

Qi reported that the research results look very promising in sustaining the Louisiana urban forest. The USDA-NIFA awarded the funding for both projects to SU Ag Center through Project Director Yadong Qi

## FACULTY AND STAFF ACCOMPLISHMENTS AND ACTIVITIES

### SU Ag Center Experiential Learning Gardeners Celebrate Accomplishments

The MISS-LOU project held its 2011 Fall Experiential Learning Garden graduation on December 20, at the SU Ag Center. This group of dedicated youth worked hard to maintain the gardens while learning how to grow, prepare and eat healthy food. Stephanie Elwood, Extension Associate, organized the celebration of the young gardeners' accomplishments.



Student plants seeds



Students tend their crops

### Bossier Parish Holds Moral Values Classes

While the call has been timely, few have attempted to define "Moral Values" or explain why it is necessary to teach them. On January 19, more than 55 inmates at the Caddo Correctional Center in the Second Chance Program attended a "Moral Values" workshop conducted by Katherine Ervin, SU Ag Center parent educator in Bossier Parish.

"Moral values, anger management and other values have been identified as key needs for the inmates because of their culture, the media and other violent acts that have influenced them. These classes will help them change their behaviors," Ervin said.



Inmates gather for classes



Through these classes, the inmates will become aware that something is wrong with their upbringing and education. The goal of these classes is to help the inmates realize that they must be responsible citizens; respect themselves and others; obey the law; have a concern for the common good and regard for truth and justice.

FACULTY AND STAFF ACCOMPLISHMENTS AND ACTIVITIES

SU Ag Center Researcher Selected to Serve on International Board

Renita W. Marshall, Associate Professor of Animal Science at Southern University Agricultural Research and Extension Center, has been selected to serve on the editorial board for the American Journal of Animal and Veterinary Sciences (AJAV).



Dr. Marshall

Marshall requested the position of editor, and later received word of her acceptance to serve as a Contributing Editor for the AJAV board.

“It is a great honor for us to have such a distinguished researcher as you on our board of Editors”, said the publication team in the announcement letter.

The letter stated her role to include contributing material from herself or her institution, and region in the shape of research/review articles, short communications, technical comments, and editorials in each issue.

Her duties also include collecting research / review articles, evaluating and submitting them for publication. Accepted articles will be available at the Science Publications web site for unlimited data download.

Other current Board members come from diverse countries including Australia, Canada, Mexico, Norway, Slovenia, and United Arab Emirates.

Please visit <http://www.thescipub.com/editorial/AJAVSsp> for further details.

SU Ag Center Parish Agent wins National Distinguished Service Award

Terrence Marshall, East Baton Rouge Extension Agent, won the National Distinguished Service Award from the National Association of County Agricultural Agents (NACAA).

The NACAA is a professional Extension organization, which makes Extension and agriculture stronger

by connecting peers to develop professionally. The goal of the association is to advance the professional status of Extension agents and specialists with agriculture-related Extension appointments. The organization serves to recognize professional excellence in Cooperative Extension nationwide.

<http://www.nacaa.com/>



SU Ag Center Faculty Served as National Conference Program Chair

Dr. Zhu Ning, Professor, Urban Forestry served as the National Conference Program Chair for the Society of American Foresters also, as an invited speaker in the at the International Arboriculture Summit in Hong Kong, November 2011.



FACULTY AND STAFF ACCOMPLISHMENTS AND ACTIVITIES

## New Hire



**Linda M. Batiste** serves as Director of Finance, replacing Dr. Adell Brown, Jr., who now fills the posi-

tion of Vice Chancellor for Research, replacing Dr. Kirkland Mellad at the SU Agricultural Research and Extension Center.

Batiste comes to us from the Baton Rouge Community College, where she served in the capacity of Assistant Professor, Accounting, responsible for planning, testing, developing, lecturing and implementing curriculum in accounting for associate degrees in business and in

accounting. She also coordinated and taught online curriculum in accounting.

Batiste is a native of Mansura in Avoyelles Parish, who holds a Bachelor of Science in Accounting and Masters of Professional Accountancy degrees from Southern University A & M College, Baton Rouge, LA.



**Lakeeshia D. Giddens**, Program Director, e-Learning, Rural Mobile Training and Development Center, joined the Ag Center staff in January.

Her responsibilities include implementation and oversight of the e-Learning Rural Mobile Training and Development Center.

Prior to coming to the Ag Center, Giddens served in the Office of Media Relations on the Southern University-Baton Rouge campus, in the capacity of Administrative Assistant II.

The St. Tammany native holds a Bachelor of Arts in Mass Communications and a Master of Arts in Mass Communications, with a con-

centration in Public Relations, from Southern University and Agricultural & Mechanical College in Baton Rouge.

## UPCOMING EVENTS

**February 13:** Money Management training. Caddo Correctional Center, Bossier Parish. Katherine Ervin, 318-965-3746

**Mar 1-3: 69th Annual Livestock Show.** SU Ag Center Arena, Baker, Louisiana  
For more information, contact Christie Monroe at 225-771-2242.

**March 13:** Nutrition Education Training for Extension agents, Ag Center. De'Shoyn York Friendship, 225-771-2582.

**March 15 – 17:** Louisiana Small Farmer Conference to be held at A. O. Williams Hall, Southern University Ag Center, Baton Rouge. The theme of this year's conference is "Building Capacity of Louisiana's Small Family Farms." For more information, please contact Dr. Dawn Mellion-Patin at 225-771-2242

**March 28– 31: Small Farmer Agricultural Leadership Training Institute,** North Carolina A&T State University, Greensboro, North Carolina. For more information, please contact Dr. Dawn Mellion-Patin at 225-771-2242.