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North Carolina A&T State University
School of Agriculture and
Environmental Sciences
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EPA gives Biological Engineering Students \$10K to green up Sockwell Hall landscaping

Biological engineering students are proving that education in the SAES is not just academic. They are bringing what they learn in the classroom to life, with their plan to transform the landscape around Sockwell Hall from chemical-dependent turf and shrubs into a model of permaculture — and a model of what Biological Engineering can do. The students recently won a \$10,000 grant from the Environmental Protection Agency (EPA) to make it happen.

The students hope to complete their project by April, and plan to use the site as a means to educate others about how to create a permaculture landscape on public or private lands.

Conservation and biodiversity are the goals of permaculture, which emphasizes native plants and spurns lawnmowers, pesticides and fertilizers. The practice is believed to have originated in arid Australia, but is slowly catching on in urban America. With proper management, the end result is not only aesthetically appealing, but biologically diverse and very low maintenance.

With clean water becoming scarcer worldwide, permaculture is a natural approach to landscaping that is slowly catching on in urban planning, said Dr. Manuel Reyes, the students' faculty mentor. "Until recently, urban planners saw rainwater as



Raeni Battles, a senior majoring in biological engineering, is a member of the team of students that is reshaping the landscape around Sockwell Hall.

a problem to be funneled into storm drains for rapid disposal," he said. The result has been soil erosion and polluted surface waters. Now, he said, planners are beginning to value rainwater as a resource and are incorporating swales and berms in cityscapes to trap rain so it will infiltrate slowly into the soil, not only to water landscapes, but to filter pollutants and replenish dwindling aquifers.

Research is an important part of the project. Students will gather data so they can present a before-and-after picture of biodiversity, water quality, and other aspects. They will also research student attitudes to the new landscape.

Carmen Young, a sophomore, said the students see permaculture as "modeling

human settlements after nature." Their inspiration came about after observing the irony about their building, which houses a program dedicated to applying engineering principles to environmental protection and conservation.

"We thought it was a little strange, here we are in the Biological Engineering Program, which is in this building that has all these issues with runoff and flooding," she said.

"We wanted to do a project that was not only for ourselves, but for future students to see what they can accomplish, and to show that there are sustainable practices that can be brought onto the campus," said Scott Carter, a senior who helped spearhead the project.

Dr. Mac's Moment

The final count is in and I'm excited that we have 907 students — undergraduate and graduate — in the SAES this semester. This gives A&T the distinction of having the largest enrollment of any historically black school of agriculture. While we are proud of this distinction, we realize that much work remains as we interest the next generation in today's agriculture.

We are one of the 18, 1890 land-grant institutions participating in the USDA 1890 National Scholars Program. This partnership between USDA and the 1890s provides full tuition, room and board plus employment, employee benefits, fees, books, use of a laptop, printer and software to students interested in studying agriculture, food and natural resources and other related businesses.

Since the program started in 1993, we've had 48 students who are presently enrolled or have completed the program. A&T, again, has enrolled the largest number of scholars of any of the 1890 institutions.

Applications for the program can be found on the USDA website and are due on Feb. 1 of each year.

We also hold an annual four-week summer program for rising high school juniors and seniors interested in agriculture, called the Research Apprenticeship Program. We select 20 students who spend the month on campus each summer, paired with a researcher, getting a taste of what agriculture is all about.

RAP applications will be online at www.ag.ncat.edu.

And every day across this state we have young people of all ages participating in 4-H programs. 4-H, which is celebrating its centennial this year, has a focus on science, engineering and technology, all areas that encompass agriculture.

If you know high achieving students who make good candidates as agriculture majors, tell them about USDA Scholars and RAP and make sure they are part of your county's 4-H activities. Today's agriculture needs them.

— Dr. Donald McDowell
Interim Dean, SAES

New Rockingham County Equine Center has SAES riding tall in the saddle

In the fall of 2008, the Department of Animal Sciences rolled out a program geared up to prepare students for a broad range of careers in equine industries, with Dr. Rusty Miller as the coordinator. Miller had joined the SAES a year earlier, bringing with him more than 30 years of experience in the equine world — including judging at two world championship horse shows.

Less than a year-and-a-half later, in the first week of December of 2009, there were groundbreaking ceremonies for a \$13.5 million equestrian center in Rockingham County that will vault the SAES into the national equestrian education scene at a hot gallop.

“As a full partner with teaching, outreach, and research laboratory facilities at the new equestrian center, the SAES is going to expand its student recruitment base in a new direction dramatically,” says Dr. Donald McDowell, the SAES’s interim dean. “There’s an incredible demand in the equine industries, across the nation as well as in North Carolina, for the training we will be providing students.”

Home for the Rockingham County equestrian center is a 155-acre parcel south of Reidsville. As a full partner in the project, along with Rockingham County and the city of Reidsville, the SAES received a grant of \$2.4 million from the State of North Carolina for facilities that will soon be under construction.

The SAES equestrian-center facilities will include a classroom — replete with digital blackboards, projection and sound systems — that will accommodate up to 150 people. All courses in the equine management certificate program will eventually meet there. A 14-stall barn, pasture, and a full lab will round out the SAES resources at the equestrian center.

In addition to the SAES facilities, the first phase of the two-phase construction project

will include several outdoor arenas, 400 stalls for shows and other events, and a covered spectator seating area for judging and riding competitions.

These facilities will translate to 105,000 hotel nights to Rockingham County, annually, as visitors for horse shows and other equine events will need lodging. Miller’s personal projection is that, “This is going to be one of the South’s major show facilities.” He’s also confident that the windfall in student recruitment is going to make the SAES goal of expanding the certificate program in equine management into a full-fledged degree program readily attainable.

Miller’s projections have sound supportive data behind them. The horse judging team and the two riding teams he has established in his four semesters with the SAES have been introducing Aggie blue and gold to national collegiate competitions. His teams have finished well up in the standings at some major collegiate competitions and that publicity has already translated to increased interest in the SAES among high school students who are equine enthusiasts.



A new partnership in Rockingham County will make the A&T School of Agriculture & Environmental Sciences a serious player in equine industries that nationally have \$2 billion in annual economic impact.

Dr. Ralph Noble, chair of the Department of Animal Sciences, seconds Miller’s enthusiasm for the student recruitment asset the Rockingham County equestrian center represents. Noble believes the added lab space will resolve a disadvantage his department has faced in offering online courses.

“Many of our animal sciences courses have lab requirements that complement classroom work,” says Noble. “So we have to have facilities for students to meet lab requirements even when they’re taking these courses online. The lab at the equestrian center will not only give us more resources for research into nutrition and parasite control, it’s also going to give us a satellite location for some students taking online courses requiring labs. Shifting the lab requirements for some students taking online courses will free up lab space here on campus.”

SAES research funding hits all-time high

Scientists and Extension specialists in the SAES continue to break records in garnering external funds for research. In the 2008-09 academic year, they brought in close to \$6.5 million in competitive funding, breaking the previous year’s record of \$5.1 million. In the past six years the faculty has nearly doubled the flow of external funding into the SAES. In the

2003-04 academic year, they won close to \$3.3 million. This consistent upward trend is testimony not only to the hard work of a dedicated faculty, but to the relevancy of their research to society, says Dr. Donald McDowell, the SAES interim dean.

“The research we are doing here ranges from addressing concerns about diabetes and nutrition, to food safety, rural poverty,

soil conservation, green energy, and biotechnology,” says McDowell. “All these things are focusing on topics and concerns that affect the people of North Carolina and the nation.”

However, there is still room for improvement, points out Dr. Shirley Hyman-Parker associate dean for the Agricultural Research Program. She is

Cooperative Extension adds nine new members to stakeholder advisory group

The Strategic Planning Council that serves as advisory board to The Cooperative Extension Program at A&T returned to campus in early November for its annual meeting, welcoming eight of nine new members to the 25-member panel.

Meeting in Coltrane Hall for a two-day immersion in all things Extension, the board heard presentations from staff on programs and initiatives. The council comprises agribusiness, education, human services and community leadership from across the state and keeps Extension administrators and specialists informed on issues that affect audiences.

The new members of the Strategic Planning Council are:

- Jasmine Brooks, of Knightdale, a student representative. A junior at A&T, Brooks is studying food and nutritional sciences and is an advocate for nutrition and food-safety issues. Brooks is a regular volunteer at health fairs and other workshops organized through the Department of Family and Consumer Sciences.

- Cemita Gibbs of Albemarle, who is executive director of the Stanly County Habitat for Humanity. Habitat in Stanly has been a partner with local Extension to help prepare families, financially, for home ownership. Gibbs is a member of the Stanly County Cooperative Extension’s Specialized Committee.

- Velma Fryar-Maddox of Turkey. In addition to being an active member of her Wilson Chapel Church, Fryar-Maddox is a recent graduate of the Small Farmer Agricultural Leadership Institute, which is supported by a consortium of 1890 land-grant institutions that includes A&T. She also advises Sampson County Cooperative Extension on small farm issues.

- Mitchell McIver of Laurinburg. McIver’s community service includes

memberships on the Juvenile Crime Prevention Council and the Scotland County Gang Taskforce. McIver is a graduate of East Carolina University with a bachelor’s degree in sociology.

- Eddie McNair from Plymouth. For 20 years, he has been the pastor of The Fountain of Life Full Gospel Baptist Church in Roper, and is also the founder and president of The New Life Community Development Corp. which has received a \$150,000 grant from the Golden Leaf Foundation to start an agribusiness incubator. McNair also serves on the Martin-Tyrrell-Washington District Board of Health.

- Amy Hardy Moyer of La Grange. She and her husband, Jack Moyer, own Rabbittown Farms & Vineyard. She is the founding member and board secretary of Slow Food Down East, a chapter of Slow Food USA. Moyer teaches English as a second language at Lenoir Community College and is also a member of the N.C. Muscadine Growers Association and the N.C. Agri-tourism Network Association.

- Justin Simmons of Supply, a student representative. Simmons, 17, is a home-schooled senior. He is the son of Sybil Mitchell-Simmons, who also serves on the Strategic Planning Council. Justin Simmons is a member of 4-H through the Brunswick County Cooperative Extension Center and is the 4-H Southeast District vice president.

- Kathleen Smith of Whiteville. Smith, who is a registered nurse, is also one of the staunchest volunteers that the Columbus County Cooperative Extension Center has. She volunteers for Family and Consumer Science events and committees,

and also volunteers with the county’s 4-H program. Smith even answers the phones when the Extension Center is short staffed.

- JoAnn Stevens of Snow Hill. Known for her work in the community with children and culture, Stevens is working to preserve the Rosenwald Center for Cultural Enrichment. Greene County is home to one of the historic Rosenwald schools, which were built across the South in 1917 after educator and Civil Rights organizer Booker T. Washington urged Julius Rosenwald, philanthropist and former president of Sears, Roebuck and Company, to help educate black children across the South.



Velma Fryar-Maddox



Mitchell McIver



Eddie McNair



Amy Hardy Moyer



Justin Simmons



Kathleen Smith

SAES will launch a new Undergraduate Research Program in the spring of 2010. Juniors and seniors involved in the program will conduct independent research, aimed at discovery and publication.

“They are the future. By developing young career scientists we hope to continue the upward trend of producing quality research,” McDowell said.

encouraging faculty to collaborate on larger applications to other funding sources, such as National Institutes of Health and the Department of Energy. “There are lots of opportunities out there,” she said.

McDowell said another way to achieve that growth is by cultivating new scientists. Toward that goal, the

on the *move*

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on the *move* / flip side

The Cooperative Extension Program at A&T and 4-H hosted an elite "Force of 100" teenagers from across the state, in mid November. The teens were selected for training to address hypertension, diabetes, strokes and other health issues that are disproportionately rampant among African Americans and other minorities. Edgar Veloz of Mecklenburg County, and Denise Blackburn and Devin Patterson, both of Warren County — pictured here — are among the "Force of 100" teens who returned to their communities with new insights into nutrition, food safety and physical fitness that they will pass along to their friends, families and classmates as part of the second phase of the program. The training was funded with a grant from the Walmart Foundation.



Check www.ag.ncat.edu/extension for "Force of 100" updates

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