

Science teachers take a seat in the classroom

By Ayanna McPhail, publications editor/writer

While Houston County students were out of school March 12, science teachers were having some fun of their own.

During an annual Houston County in-service science workshop nearly 70 high school educators learned about forensics and DNA fingerprinting used to investigate crime scenes. The lessons were taught by Fort Valley State University researchers and educators at Houston County High School in Warner Robins.

Teachers learned about, and practiced, in-vitro fertilization and cloning – but with the use of plants. Dr. Ann Williams-Brown, science coordinator for the Houston County school system, planned the event.

Dr. Sarwan Dhir, an associate professor of biotechnology and director of multiple programs at FVSU; Dr. Hari Singh, a research professional who specializes in molecular biology; Seema Dhir, an assistant professor of biology; research assistant Kaye Knowles; and research technician Heather Bowens, all from Fort Valley State, demonstrated cutting-edge lab techniques that Houston County students can use in their various science classes.

“Participating in the workshop was a wonderful opportunity that we couldn’t pass up. It was a chance to reach teachers who are in daily contact with students,” Dr. Sarwan Dhir said. “Giving young people a glimpse of careers in the science arena is part of our mission as educators and scientists.”

During one laboratory exercise, Dr. Sarwan Dhir used young flower parts to demonstrate in-vitro cloning and fertilization concepts.

Using a microscope that projected onto a screen to demonstrate a laboratory technique, Dhir placed the female and male parts of an unpollinated flower in a Petri dish. He explained that when a flower ovule (female part) fuses with flower pollen (male part) in the container, the combination eventually produces a new flower with desired characteristics in six to 10 weeks.

During his presentation, Dhir said the demonstrated techniques are powerful tools in the field of biotechnology.



Fort Valley State University student worker Hussein Salifu (center) assists Warner Robins High School educators Rhonda Parker and Duke Wellington who participated in a Houston County in-service science workshop March 12.

“The teachers can train the high school students and provide a strong foundation for their future,” said the associate professor. “The teachers are the ones who can expose them to new science disciplines, including biotechnology, genomics and forensics. These are careers that are growing in the job market.”

During another laboratory experiment, Singh taught techniques used by crime investigators who match DNA samples from a crime scene with samples taken from criminal suspects.

“I think this would be a really cool thing for the students to do,” said Nicole Page, a ninth-grade biology teacher at Warner Robins High School.

Page, who teaches a regular class that includes special education students, said the lessons she learned at the four-hour workshop will be useful.

Instead of learning about science in a textbook, her students will be able to use the hands-on lab techniques, Page said.

Georgia Farm Credit Associations award scholarships to FVSU students

By B.K. Lilja, head-Agricultural Communications

The Georgia Farm Credit Associations awarded scholarships to three students in the Fort Valley State University College of Agriculture, Home Economics and Allied Programs in January on the FVSU campus.

Jack Drew, chief operating officer of the AgGeorgia Farm Credit Agricultural Credit Association, and Lisa Corbett, vice president of the AgSouth Farm Credit ACA, presented \$500 GFCA scholarships to Nicole M. Cook, a senior majoring in animal science and veterinary science technology, and Esther Nicole Hunt and Ashlee McGhee, both juniors majoring in plant science.

The scholarships awarded during a 10 a.m. presentation ceremony in the C.W. Pettigrew Farm and Community Life Center on Jan. 11 were the first given to FVSU students by the Georgia Farm Credit Associations.

During the scholarship presentation, Drew said the ACAs that makeup the Georgia Farm Credit Associations are “proud to continue the legacy of promoting agricultural education through the inception of a scholarship program at Fort Valley State University.”

“Farm Credit has always supported FFA, 4-H and other ag education programs throughout the state and we look forward to contributing to the education of students at FVSU’s College of Agriculture through our state scholarship program,” he told the students; Corbett; Dr. Mack Nelson, dean of the College of Agriculture, Home Economics and Allied Programs; Mary Kiley, AgGeorgia Farm Credit marketing manager; Dr. Mark Latimore, interim head of agricultural education; and Neal Leonard, agriculture liaison officer.

Nelson said the college and university deeply appreciated the support and commitment to education and agriculture that GFCA offered through its scholarship program.

“We look forward to a growing relationship between the Georgia Farm Credit Associations and this university,” Nelson said. “It is through the active commitment of both private and public sector agencies that education – not just agricultural education, but all education – will continue to grow and flourish at Fort Valley State University and other seats of higher learning in Georgia and the nation.”

GFCA members and AgGeorgia Farm Credit ACA, with corporate offices in Dublin; AgSouth Farm Credit ACA headquartered in Statesboro; and Southwest Georgia Farm Credit ACA, based in Bainbridge, play a key role in serving the credit needs of Georgia’s farmers, ranchers, and ag cooperatives, and the mortgage needs of Georgia’s homeowners with a combined loan volume in the state in excess of \$2.1 billion.



(L-R) Neal Leonard, agricultural liaison officer at FVSU; Dr. Mack Nelson, FVSU dean of the College of Agriculture, Home Economics and Allied Programs; FVSU students Nicole M. Cook, Esther Nicole Hunt and Ashlee McGhee; Lisa Corbett, AgSouth Farm Credit vice president; Jack Drew, AgGeorgia Farm Credit chief operating officer; Mary Kiley, AgGeorgia Farm Credit marketing manager; and Dr. Mark Latimore, FVSU interim head of agricultural instruction, pause for a group photo during the GFCA scholarship presentation ceremony in FVSU’s Pettigrew Center, Jan. 11.



At a workshop March 3 hosted by the Southern Consortium for Small Ruminant Parasite Control, guest speaker Hendrick Botha (above), from South Africa, talked about using a plant to control parasites in plant-eating animals.

Parasite control from the ground up

By Ayanna McPhail, publications editor/writer

A farmer and a professor from South Africa traveled to Fort Valley State University in March to discuss a problem their countrymen share with Georgia farmers.

Farmer Hendrik Botha and professor Gareth Bath of the University of Pretoria in South Africa spent a day at Fort Valley State’s Meat Technology Center discussing the health and economic benefits of a plant called sericea lespedeza (*Lespedeza cuneata*). The plant controls parasites in goats and other plant-eating animals, according to FVSU researchers.

On March 3, nearly 30 farmers attended a one-day workshop about the plant. The Southern Consortium for Small Ruminant Parasite Control, comprised of scientists and specialists who work with livestock producers, hosted the workshop.

Botha, a consortium member and owner of the 25,000-acre Harmony Farm in Matatielle, South Africa, has been in business 44 years. He told workshop participants that the plant he discovered ten years ago has transformed his entire small-stock production of animals.

The farmer said he saw a dramatic reduction of parasite infection among his sheep that eat the plant as food.

“We’d been trying a lot of things over the years, then I was exposed to sericea lespedeza. This is the answer for the future,” Botha said.

The South African said his entire farming business has changed because of a reduction in costs. Botha said he spends less money on food and treating parasites because the plant is inexpensive.

As a perennial self-seeding plant that grows in almost any type of soil, the plant only needs a small amount of fertilizer during its first couple of years of growth, the livestock producer explained. Also, it provides the soil with nutrients and thrives with little rain or irrigation.

However, Botha cautioned, the plant needs a couple of years to establish itself as a crop and remains dormant during the winter.

The plant is ideal for Georgia weather because there’s no summer perennial legume that naturally grows in the state, said Dr. Thomas Terrill, a research professional at Fort Valley State’s College of Agriculture, Home Economics and Allied Programs who invited Botha and Bath to the campus.

Also, the amount of rain and hot southern weather are good conditions for maintaining the plant, said Terrill, who has researched plants eaten by grazing animals and parasite control in goats for 15 years.

The plant, available at Sim’s Brothers Seed Company in Union Springs, Ala., is useful because animals often become immune to drugs used repeatedly to treat parasites, Terrill said.

“As a high-quality, low-cost feed, sericea lespedeza could be the difference between making it and not making it, particularly for small farmers,” said Terrill, who noted that small farmers go out of business spending money on infected animals.

Photo by Ayanna McPhail

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Photo by Cindy Cambill