



Points of Pride

- The Delta Research and Extension Center recently gained Highway 82 frontage with the use of 200 acres of farmland in Leland.

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Delta Research and Extension Center's

AGRI-BYTES

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New leader named at Delta Research

Steve Martin has been named head of Mississippi State University's Delta Research and Extension Center in Stoneville.

Martin assumed his duties as head of the regional facility Nov. 1. He was named interim head of the center in July 2008, following the appointment of then Delta Center head Joe Street as associate director of the MSU Extension Service.

The new center administrator began his MSU career in 1997 as a graduate research assistant in the Department of Agricultural Economics. He earned his doctorate in agricultural economics at Mississippi

State and also holds master's and bachelor's degrees in business administration and agricultural and extension education, respectively, from MSU.

"Dr. Martin's almost decade of service as a research scientist in the Delta, plus more than 12 years in agricultural business give him a unique mix of experiences for this role," said Greg Bohach, vice president of MSU's Division of Agriculture, Forestry and Veterinary Medicine. "He has a strong commitment to all aspects of the region's economic development, as well as dedication to MSU's role in educational outreach."



The Delta Center staff includes more than 30 research scientists and more than 100 support personnel. The facility includes the Cochran National Warmwater Aquaculture Center and the Capps Entrepreneurial Center, as well as facilities for regional and federal agencies. It is also the headquarters of the MSU Extension Service's northwest region.

—Bob Ratliff
MSU Agricultural Communications



Above: MAFES Agricultural Engineer Lyle Pringle surveys land grading efforts on DREC's newly leased acreage facing Highway 82 near Leland.

Left: Frigid January temperatures left ice on DREC's 314 catfish ponds, yet the fish remained safe near pond bottoms.



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DREC evaluates insecticides to protect peanuts

Call them goobers, money nuts or earth nuts, but peanuts have become a good commercial crop for Delta farmers, and two Mississippi State University researchers are evaluating the effect of a group of insecticides on hard-to-control pests that impact yields of this little jewel.

"Peanuts have become an economically beneficial crop in Mississippi as more farmers are planting them now that the quota system has ended. Yet, these plants are susceptible to insects such as caterpillars, three-cornered alfalfa hoppers and numerous soil insects," said Jeff Gore, DREC entomologist.

Caterpillars eat peanut plant leaves and are difficult to control using insecticides. Adults are active at dusk or at night and lay eggs on plants and foliage. Small, green three-cornered alfalfa hoppers insert their beaks into plants to suck juices from the stems, which leaves the plant girdled and weakened.

Soil insects often go unseen, but their effects can be visually evident. They feed on plant roots and reduce growth and productivity. The worst case scenario is when soil insects feed on the developing pods resulting in yield losses.

"We are evaluating the potential damage and impact that insects cause on yields of peanuts because we do not know how they have been affecting the state's crop," said Don Cook, DREC entomologist.

Using insecticides like organophosphates and carbamates, Gore and Cook are applying treatments and counting insect levels to determine treatment effectiveness. These are the same class of insecticides that have been used in the past in other areas of the country.

"These insecticides have always been effective but they have not been evaluated in Mississippi," Gore said.

Currently, most of the insect control recommendations are based on data derived from other states such as the southeast and Texas where peanuts have traditionally been grown in

recent years and we don't have a lot of data from Mississippi to base our recommendations

Peanuts can also benefit the Delta's cotton farmers by replenishing the depleted soil with organic matter and nutrients such as nitrogen. Cotton requires large amounts of nitrogen to achieve good height, color, fruit production and canopy cover.

"Peanuts leave much crop residue and biomass to help supplement the soil after harvest," Cook said.

According to the National Agricultural Statistics Service, Mississippi farmers planted 4,000 acres of peanuts ten years ago. In 2005, NASS listed Mississippi as one of 10 states for planting peanuts. Last year the state producers' planted more than 20,000 acres in peanuts and produced 39,000 pounds of the legume.

—Rebekah Ray

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Researchers at Mississippi State University's Delta Research and Extension Center in Stoneville harvest peanuts as part of their study on insecticides.

DREC'S ARDL keeps catfish safe



MSU Veterinarian Pat Gaunt checks a slide at the ARDL in Stoneville. The lab works with area catfish producers to keep stock healthy and safe to eat.

ally approved by the FDA for the treatment of this disease.

The ARDL works closely with fish health professionals to treat sick fish.

Gaunt shares on-call duties at the lab with Veterinarian Lester Khoo and Microbiologist Michael Maul.

“The lab monitors disease trends, provides surveillance for new and emerging diseases, offers field service investigation and maintains a database of epidemiological information of diseases of catfish,” Khoo said.

The ARDL works with MSU’s National Warmwater Aquaculture Center, MAFES, MSU Extension, the College of Veterinary Medicine and USDA-ARS Catfish Genetics Research Unit.

Last year the ARDL diagnosed 550 cases from 59 farms and analyzed just over one thousand water samples.

Khoo recommends that producers use services provided by the ARDL especially during these difficult economic times. Personnel from NWAC are happy to visit farms and provide on-site calls.

For more information, contact the ARDL at (662) 686-3302.

—Rebekah Ray

The ARDL is very much like a veterinary hospital in that it examines fish to determine what is wrong and then prescribes medical treatments.

Mississippi produces more than sixty percent of the nation’s pond-raised catfish and several Mississippi State University researchers at the Aquatic Research & Diagnostic Laboratory (ADRL) in Stoneville are keeping the fish safe to eat.

“The ARDL is very much like a veterinary hospital in that it examines fish to determine what is wrong and then prescribes medical treatments,” said Pat Gaunt, ARDL veterinarian. The lab also checks fish to verify the health status before the sale of a fish farm.

Producers bring their fish to the lab for us to take gill clips and skin scrapes to check for parasites and to do bacterial and viral cultures. The laboratory also performs analysis of pond water to make sure it’s suitable for raising catfish, Gaunt said.

Bacterial diseases domi-

nated cases submitted in 2008. Columnaris totaled over 11 percent while Enteric Septicemia of Catfish (ESC) totaled over seven percent. Proliferative Gill Disease (PGD) totaled over 33 percent and was the most commonly diagnosed parasitic disease.

“When seasonal temperatures change, occurrence of columnaris disease and Enteric Septicemia of Catfish (ESC) also increases greatly,” Gaunt said.

“Producers can tell if their fish are infected by *Flavobacterium columnare*, the bacteria that causes columnaris disease because of the presence of lesions and yellow-brown discolorations around fish mouths and skin.”

The prescribed treatment for columnaris disease is the medicated feed florfenicol, which is the only medicated feed that has been tested and condition-



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DREC names Coleman new farm supervisor

Russell Coleman became farm supervisor at Mississippi State University's Delta Research and Extension Center in Stoneville on Oct. 1, 2009.

"We're glad to have someone with Russell's knowledge and experience of farming and research join us in managing this facility," said Sean Horton, farm manager of the 4,300-acre facility.

Coleman has worked as an agricultural technician at DREC for 17 years.

"I will oversee plots of our research scientists and make certain our farm crew plows, plants and harvests crops to the necessary specifications of the researchers," Coleman said.

The delta research facility focuses its work on catfish, corn, cotton, rice and soybean.

—Rebekah Ray



Soil Sampling

Agricultural technician Scott Steele grinds soil samples for DREC Agronomist Wayne Ebelhar. Approximately 2,000 bags of soil were plugged from fields at Stoneville and Tribbett to check fertility levels. After grinding, sieving and mixing, samples were sent to Mississippi State University's Soil Testing and Plant Analysis Lab to be analyzed for organic matter, pH levels, phosphorus and potassium levels, exchangeable cations, cation exchange capacity, zinc and sulfur.