

---

---

# AAES Impact

RESEARCH NEWS FROM THE ALABAMA AGRICULTURAL EXPERIMENT STATION

Winter 2011

vol. 9, no. 4

---

---



**SITTING TARGETS**—Insect pests are a major challenge for producers who grow broccoli and other cruciferous crops organically.

## Project targets pests of organic crucifers

Auburn researchers are using an \$881,000-plus grant from the USDA to fund a four-year project that aims to increase the productivity and profitability of organic vegetable production in the South.

Specifically, the scientists are focusing on cruciferous crops, such as cabbage, collards and broccoli. Crucifers are high-value crops but are difficult to grow organically in the region because they are highly susceptible to destructive insect pests.

In the project, led by Auburn and AAES entomologist Henry Fadamiro, the team will develop effective, affordable and sustainable integrated pest management strategies and then work with producers to adopt them.

Integrated pest management is a pest control approach in which a variety of economically and environmentally acceptable farming practices, such as tillage systems and insect traps, are used instead of chemical pesticides.

The project will include on-farm research trials, Fadamiro says, noting that at least 10 organic vegetable growers across the state have signed on to participate in the study. ♦

## Study will put value on lake's lure for anglers

At 69,000 acres, Lake Guntersville is the largest in the state, and fishing—both recreational and tournament—is very big business. Just how big an economic impact it has on Guntersville, Marshall County and beyond is what Auburn researchers will determine in a new study funded by the Alabama Department of Conservation and Natural Resources.

In the study, Terry Hanson, associate professor of aquaculture economics at Auburn, and fisheries research associate Steve Sammons will collect and analyze comprehensive data on recreational and competitive anglers' spending habits in Guntersville and surrounding communities in terms of food, lodging, permits, tackle, bait, equipment rental and more.

Hanson says putting a dollar figure on fishing's contributions to local and state economies and their tax bases will provide valuable information to local governments, fishing agencies and associations and chambers of commerce and will be useful in policy development.

## Center to foster vital research, innovation

Construction will begin soon on a \$28.8 million facility that will house multidisciplinary research at Auburn in the areas of food safety, bioenergy technologies, aquaculture development and sustainability, and water and environmental quality.

The 84,000-square-foot Center for Advanced Science, Innovation and Commerce at the Auburn University Research Park is being funded by a \$14.4 million grant from the U.S. Department of Commerce's National Institute of Standards and Technology and matching dollars from the State of Alabama as well as support from Auburn University and the Alabama Ag Experiment Station.



**REELING 'EM IN**—A lone fisherman casts into the sunset on Lake Guntersville, a body of water known among recreational and tournament anglers alike as one of the best bass fisheries in the world.

The grant from the ADCNR's Wildlife and Freshwater Fisheries Division is one of seven external grants totaling almost \$468,000 that Hanson, an AAES researcher, was awarded in 2011. ♦

Though Auburn College of Ag and AAES personnel led the successful bid for the federal grant, scientists from the colleges of Engineering, Sciences and Mathematics, and Architecture, Design and Construction and the School of Forestry and Wildlife Sciences at Auburn also will be conducting research in the facility.

The CASIC building will include 20 labs as well as shared support spaces and specialized equipment areas.

University, state and federal officials recently broke ground on the center, which, when completed, is expected to bring in millions of dollars in grants and contracts annually. ♦

---

**IMPACT** is a quarterly newsletter the Alabama Agricultural Experiment Station (AAES) publishes to inform state and federal legislators, public policymakers and the general public about AAES research projects and how they affect all Alabamians. The AAES ([www.aaes.auburn.edu](http://www.aaes.auburn.edu)) is based at Auburn University ([www.auburn.edu](http://www.auburn.edu)). Contact **IMPACT** at 334-844-2783 or [jcreamer@auburn.edu](mailto:jcreamer@auburn.edu).

## Wheat farmers can make most of weather

Farmers in Alabama are all too familiar with El Niño and La Niña climate conditions and the havoc they can wreak on rainfall patterns and, subsequently, on profit margins in the Southeast, but an Auburn agronomist is on a mission to show producers across the state that they can, in some ways, outwit the weather phenomena.

Brenda Ortiz, an AAES researcher and Extension agronomist, is three years into a project to determine the relations between climatic conditions and crop growth and yield of winter wheat and develop best management practices that will allow growers to optimize their opportunities during the wetter El Niño cycles and reduce their risks in the droughts that result from La Niña.

In research plots planted at three AAES research centers around the state, Ortiz has collected two years' worth of data on how, during the two weather



**AMBER WAVES**—An agronomist at Auburn is identifying the best wheat varieties and the best times to plant during El Niño and La Niña cycles.

events, temperatures and rainfall totals vary among north, central and south Alabama and how they affect yields of several winter wheat varieties. Her findings will help show farmers how planting date and wheat variety can be altered according to the El Niño or La Niña conditions. Data from this project also will be used to conduct regional research projects related to climate change. ♦

## Scientists use avatars in anti-obesity study

In a novel approach to the battle against childhood obesity, two Auburn University human scientists are using 3-D body-scanning technology and computer-generated avatars to help motivate youngsters to eat healthy foods, be physically active and feel good about their bodies.

The high-tech component is part of a five-month multifaceted obesity intervention project that AAES researchers Lenda Jo Connell and Sareen Gropper are conducting with 120 fourth-graders at three elementary schools in Chambers County.

The pilot project, funded mainly by the Coke Foundation, also incorporates enhanced nutrition education, increased physical activ-

ity and strong parental involvement.

In Alabama, 34.6 percent of children ages 10 to 17 are overweight or obese, compared to 30.6 percent nationally.

Current school-based anti-obesity programs that focus on dietary and physical activity habits alone have had little success in reducing the prevalence of childhood obesity. Connell theorizes that the use of personal avatars representing children's "ideal" selves will provide positive motivation and positive body images for the youngsters in the study group and that body scans conducted when the program ends in mid-February will show that the students' body mass indexes have not increased. ♦

## Timberland sales impact economies

The recent trend among forest products corporations to sell off substantial tracts of commercial timberland to outside investment firms and trusts that may or may not keep the land in timber has prompted an Auburn University rural sociologist to investigate how rural communities, local governments and family-owned forests in timber-dependent areas of the state will be affected economically by the potential land-use changes.

Conner Bailey, AAES scientist and director of the five-year federal-funded study, aims to document



**CHANGES**—Sales of timberland will affect communities.

all corporate forestland ownership transfers in the state in recent years, analyze the social and economic impacts the land sales are having and identify ways rural communities can not only

reduce the negative consequences of the changing landscape but also maximize the benefits.

Bailey, working with Auburn forestry faculty Larry Teeter and Rebecca Barlow in the project, speculates that in west-central Alabama, new owners will keep the land in commercial timber production because of a lack of alternative uses, but that in other parts of the state, growing demand for rural residential property or for manufacturing could lead investors to sell the land for other uses.

Corporate divestiture of timberland is a significant issue for Alabama, which has the third most forestland acreage in the 48 contiguous states, Bailey says. ♦

*Information contained herein is available to all persons without regard to race, religion, gender or national origin.*