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Clemson's Edisto center expands precision-ag program

MEDIA RELEASE

Scott Miller, Public Service and Agriculture
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BLACKVILLE — Clemson University's Edisto Research and Education Center in Blackville has hired a precision-agriculture specialist to help farmers apply the latest technological advancements.

Hollens Free is the latest specialist to join Edisto REC as the center expands its precision-agriculture program, but he won't be the last. Edisto REC is hiring a soil fertility/plant nutrition specialist as well, said John Mueller, director of Edisto REC. Free's hiring also comes on the heels of two additions to the research center's precision-ag work last year.

Among the work at Edisto REC, researchers are developing precision-agriculture technologies and management practices to make farming more efficient. Tractors are equipped with GIS/GPS systems that allow precise steering and tracking through a field. When coupled with soil texture maps, they will allow growers to apply fertilizers and pesticides only where needed and at very specific rates. Likewise, irrigation systems with similar equipment can apply very specific amounts of water only where needed. The goal is to cut waste, maximize profit and minimize environmental impacts.

"These farmers have all kinds of technologies on tractors now. If they're like I am with my smartphone, they're only using 10 percent of the technology that's available to them," Mueller said.

Free will ensure farmers capitalize on these investments in technology. He'll also work with Clemson faculty to develop new technologies, Mueller said.

Before joining Edisto REC as an Extension precision-agriculture specialist, Free worked at the experiment station in Blackville. He is pursuing a master's degree in plant and environmental sciences from Clemson. Free graduated from Clemson in 2010 with a bachelor's degree in

Hollens Free has joined the growing precision-agriculture program at the Edisto Research and Education Center.
Image Credit: Clemson University

agricultural mechanization and business.

"Data management is really big," Free said of the new technological tools available to farmers. "Growers are getting all of this data, but they're not really sure what to do with it. I'll show them how to properly make yield maps and provide training on new equipment. "

Edisto REC has expanded its precision-ag work in the past year with help from investments from the state legislature. Precision agriculture is particularly important in South Carolina, where soil is subject to a high degree of variability that impacts crop production. Even small improvements to agriculture and forestry, which represent the state's largest industry with a $42 billion economic impact, can add millions to the state's economy.

Among recent expansions to Edisto REC's precision-ag program, the center hired computer scientist Joe Mari Maja to develop sensors that can be used to monitor crops for diseases, pests or drought stress. Last year, Maja received Federal Aviation Administration approval to fly drones that could use the sensors to gather information in the field in a fraction of the time it takes now. His work will help farmers pinpoint where to fertilize, irrigate or spray for pests or disease.

Additionally, Edisto REC hired ag-mechanization specialist Kendall Kirk last year. He is developing peanut yield monitors, an automated system to manage grain bins and a program to automate a peanut digger that works at variable depths.

Edisto currently is working to hire an Extension peanut specialist and a sensor engineer to work with Maja, Mueller said.

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Tags: Advanced Plant Technology, Cooperative Extension, Edisto, Edisto Research And Education Center, Environmental Stewardship, Mechanization, Precision Agriculture, Sustainability

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