

UF-led research team wins a four-year, \$5.4 million federal grant

Several FESC-funded researchers are part of a University of Florida-led research team that has won a four-year, \$5.4 million federal grant to develop methods of producing energy from a familiar southern crop, sweet sorghum.

Known as a source of table syrup and cattle feed, sweet sorghum is also one of the region's most promising feedstocks for making fuel ethanol.

The grant is part of a \$47 million package announced earlier this month to support eight bioenergy projects nationwide. Funded by the U.S. Department of Agriculture and Department of Energy, the package is part of a federal effort to reduce dependence on imported oil and cut greenhouse gas emissions associated with petroleum fuels.

The team will focus on research aimed at enhancing production of sweet sorghum as an energy crop, he said. The team will also explore sweet sorghum as a source of raw materials for chemicals used to make bioplastics and other products.

The project will investigate sweet sorghum's economic potential, sustainability and environmental impact, said Wilfred Vermerris, principal investiga-



Agronomist and bioenergy expert Wilfred Vermerris, seen here in a North Florida sorghum field, is the principal investigator in a University of Florida-based project that garnered a four-year, \$5.4 million federal grant to explore the bioenergy potential of sweet sorghum. The grant, funded by the U.S. Department of Agriculture and U.S. Department of Energy, will fund research to develop and assess sweet sorghum varieties for production of fuel ethanol and chemicals

tor and an associate professor with UF's agronomy department and the UF Genetics Institute.

"Sustainability and environmental impact have been of concern to many people looking at bioenergy production," Vermerris said. "We don't want to create more greenhouse gases than we would using petroleum production."

The team will develop and evaluate multiple varieties to assess factors such as water needs, ability to grow in Florida soils, heat tolerance, and susceptibility to diseases and insect pests.

Researchers will look for varieties that yield large amounts of fermentable sugars, which can be fermented to produce fuel ethanol, he said.

They also plan to produce what's called cellulosic ethanol, made from fiber in the plant's crushed stalks using genetically engineered bacteria developed at UF by Lonnie Ingram, a distinguished professor in the microbiology and cell science department, and colleagues. Ingram was an invited speaker at last year's FESC Summit.

Also among the seven co-principal investigators are FESC-funded researchers Jim Preston, K.T. Shanmugam and John Erickson. Preston and Shanmugam will work closely with Ingram on juice and biomass processing experiments at the UF Ethanol Pilot Plant in Gainesville and the Stan Mayfield Biorefinery in Perry.

The team plans to test promising sorghum varieties on a commercial scale. To accomplish this, the Tampa-based firm U.S. EnviroFuels LLC, will collaborate on the project as a co-principal investigator. Some of the experiments will take place at the Highlands EnviroFuels commercial-scale biorefinery in Lake Placid, Fla.

Source: [UF/IFAS News](#)