Video: Project aims to eliminate 'ugly' sweet potatoes

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Sweet potatoes are one of the most important food crops in the world, but variations in shape and size can cause farmers to leave entire fields unharvested.

Mike Boyette, Philip Morris Professor of Biological and Agricultural Engineering, wants to change that.

For the last two decades, he's been looking for ways to measure and characterize the shape and size of sweet potatoes because those factors have a big influence on their value.

Right now, for example, a U.S. No. 1 sweet potato would retail for 75 cents a pound, but potatoes considered too large, small or misshapen would only fetch 10 to 15 cents a pound – or even less. Sometimes, Boyette says, farmers can't even sell them, despite that fact that their taste and nutrition are the exact same as their more attractive counterparts.

And some farmers can't afford to harvest ugly sweet potatoes because they're worth so little, says Boyette. "Perfectly good food is being left in the field."

So he launched a project that could help improve the productivity of sweet potato crops in North Carolina and beyond.

"A big part of this project has been … to design the instrumentation that

we can use to measure shape and be able to crunch the numbers and get something useful from it," Boyette says.

Data gathered from a laser scanner will enable researchers and farmers to test all the factors that influence shape and size – fertilizer application, planting and harvest dates, irrigation levels – in order to determine best growing conditions for ideally-sized sweet potatoes.

"That's our ultimate goal, to help these farmers reduce their waste and be able to market a product consumers want," says Amber Tsirnikas, a master's student working with Boyette on the project.

Provided by North Carolina State University

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