

## Virginia Leads the Nation With This Green Fuel

By Sandy Hausman  
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Every year, Virginia spends a billion dollars on energy from somewhere else – fuel oil, propane or kerosene to heat homes. Now, farmers in Virginia are growing an alternative fuel – a clean, sustainable grass that promises to keep the cash here in the Commonwealth. Sandy Hausman has that story.



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There was a time, before settlers arrived in Virginia, before metal plows made it possible to plant neat rows of cotton, tobacco and corn, when dawn here probably sounded like this. Hundreds of songbird species – many now rare or endangered – fed on the seeds of native grasses and wildflowers. Today, they're coming back thanks to a unique partnership between Virginia Tech, state foresters and a businessman from Ohio who found cheap farmland in Virginia.

“These are old cattle farms that have been abandoned, old tobacco farms that have been abandoned,” says Fred Circle, president of FDC Enterprises. “There’s over 3 million acres of underutilized land just in Southside Virginia. I can’t find that in the Midwest.”

The firm leases and restores farmland to its original state with wild grasses and flowers that feed birds, bees and butterflies.

“These plants capture a lot of carbon,” Circle explains. “It all gets transferred into the root systems. The native grasses, like switch grasses, have very extensive root systems, some going down as much as 10-14 feet.”

Those roots hold the soil – protecting it from erosion, and because carbon is stored in the roots, there’s very little pollution when native switchgrass is cut, dried and burned.

This year, FDC harvested 7,000 tons of the stuff from Campbell and Halifax Counties, while new plants took root near Harrisonburg, Amherst and Elkton. By 2017, Circle hopes to harvest twice as much of this clean, renewable fuel.

“The thing that’s neat about it is this is sustainable, and it is an annual check,” says former Tech researcher Charlie Cushwa. “It is an annual check that comes to the landowner. It’s called mailbox money. You come the first of the year and get your check.”

But it took some effort to find farmers willing to lease land for switchgrass. Fred Circle remembers the first man to sign up – a physician and farmer who lived about an hour southwest of Richmond. Dr. Hugo Falcon was director of medicine at Piedmont Geriatric Hospital. He agreed to grow switchgrass on his

600 acres, then use it to fuel the hospital's boilers, which had been running on oil. It took years to convert the equipment and determine how best to grind the grass, but Circle says they did it.

"This is the only place in the country that's using grass to burn in a power plant. Think about that!" Circle says.

Brian Decker has been doing just that as manager for the state's Community Wood and Energy Program.

"Over a billion dollars a year leaves our Virginia economy for the purchase of fuel oil, propane and kerosene," he says. To keep that money here, he's worked with FDC to find new markets for switchgrass and has watched as this state became the number one producer in the nation.

"About five years ago, they had about 200 acres. Now, they have close to 3,000," Decker says.

He's also promoted the use of wood chips and sawdust – waste products from local sawmills which, if burned at a high temperature, produce very little pollution. We'll have that story tomorrow.