

# GREATER WILMINGTON BUSINESS JOURNAL



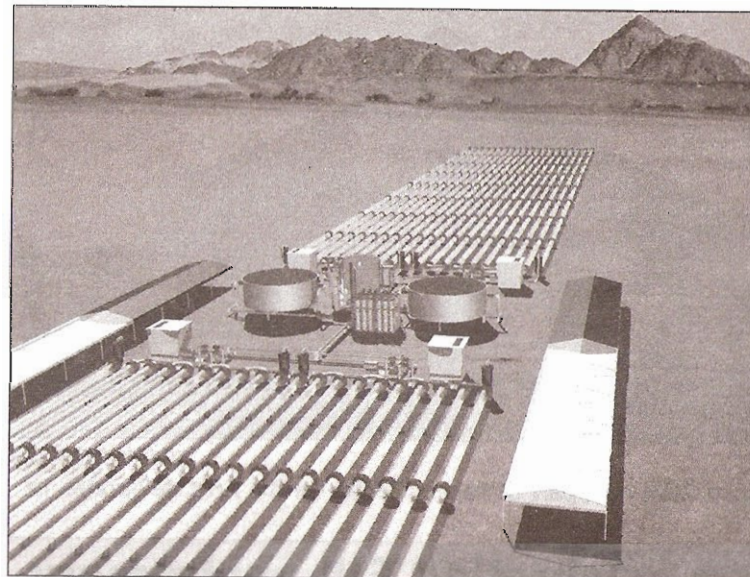
**Algae science**  
Oak Island  
company turning  
algae into biodiesel  
**Technology,**  
Page 10

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## | In the news |



CONTRIBUTED RENDERING

**Algae  
algorithm:**  
Schematic  
depictions  
of a full-size  
AlgaeLink  
facility. The  
Oak Island  
pilot plant will  
start off much  
smaller than  
the depictions  
at left.

# Southport company dives into algae energy

Alganomics, LLC, a Southport-based bioenergy startup, reports progress toward producing biodiesel from algae at their pilot facility in Oak Island.

Alganomics was founded last October and has secured a \$60,000 grant from the NC Green Business Fund to produce specialized algae that can be converted to biodiesel, a replacement for diesel fuel.

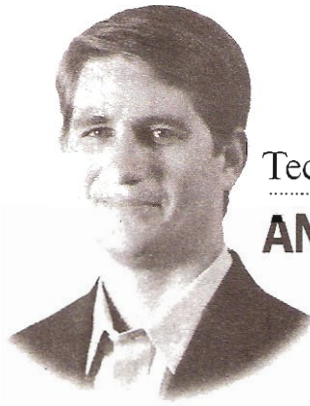
The process of making biodiesel starts with growing specific species of algae that are rich in lipids, then extracting the vegetable oil and converting it to fuel.

These species of algae produce oils that are similar to vegetable oil from soybean and canola, but they do not compete with these commodities for food production.

After the algae is grown, there are a variety of methods used to extract the oil. First, the algae are strained from the water, and the water is reused, according to Kimberly Jones, Alganomics CEO and Senior Research Scientist.

New extraction technology and new algae species promise to increase yields in the future. The remaining bioproduct can be processed and used as animal feed or fertilizer.

As biodiesel is actually a mixture of esters, different types of vegetable oils can produce fuels with different properties. Research has shown that oil from algae tends to have many



Technology  
**ANDREW**  
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desirable properties for biodiesel.

Alganomics is the exclusive U.S. distributor of AlgaeLink. AlgaeLink produces closed systems that produce algae continuously, are automated and are not prone to contamination.

Currently, the goal of the pilot program is to initially produce about 15 liters of oil per day, then scaling up to about 10,000 gallons of diesel per year.

Jones said “the future of the culturing systems is being on a more localized level at waste water treatment plants.”

After the pilot program, the company plans to produce additional income by distributing the AlgaeLink systems, selling bioenergy products and consulting on commercial installation.

“Over the next 2-5 years, we will see an exponential increase in our success at using algae for BioEnergy, BioFuels, waste remediation, carbon capture, and health products, because of the recent surge in investment and activity to explore and implement these algae-focused opportunities.”

said Randall Johnson, Director of the Southeastern Office of the North Carolina Biotechnology Center. In addition to creating fuel, algae also have application in environmental remediation and waste control. Algae can be used as a cheap “digester” to process municipal waste, saving municipalities money and creating a new revenue stream from the harvested algae for biofuel.

“Algae love dirty water and dirty CO<sub>2</sub>-laden air,” Johnson said. “Consequently, (algae) can be used as part of water purification and/or CO<sub>2</sub> sequestration strategies for industry, especially as water supplies become more constrained and climate-change-prevention regulations emerge in coming years.”

Johnson predicts that we will see commercial production of biodiesel from algae on a small scale in the next year, followed by even greater investment in the corporate endeavor, as key consortia of researchers and industry devote more resources to the effort.



Jones