Research and Innovation

FROM THE FORD "SCI LAB"

April 11, 2011: ALGAE AS POTENTIAL BIOFUEL

FROM THE LABS OF FORD MOTOR COMPANY researchers are working to understand the suitability of renewable sources such as algae as potential biofuels.

HOW IT WORKS: Algae has some desirable characteristics as a potential biofuel feedstock because certain species of algae have the ability to efficiently convert carbon dioxide to oil, carbohydrates and other cell components through photosynthesis. Other algae characteristics that make it an interesting biofuel feedstock candidate:

- Algae can be grown in a variety of environments including fresh or saline waters
- Algae can double in number daily and be harvested year-round, a distinct advantage over other biofuel feedstocks such as soybeans or corn, which produce just one crop per year

Currently, algae researchers are looking for economical and sustainable ways for commercial-scale controlled production and culturing of high oil-producing algae.

POTENTIAL CONSUMER BENEFIT: The use and availability of biofuels offer customers another way to help reduce the nation's dependence on foreign oil and address climate change. Ford wants to continue to give customers the power of choice by supporting increased availability of biofuels and biofuel blends from diverse and sustainable sources and design vehicles that are capable of using these fuels.

- Between 2006 and 2010, Ford doubled the number of flexible fuel vehicles – which can run on gasoline or E85 ethanol – it produced in the U.S.
- Globally, Ford has more than 5 million E85-capable vehicles on the road and offers more than a dozen vehicle models around the world with the capability

WHAT'S NEXT: Ford researchers will continue to monitor outside research of algae as a potential feedstock for the long-term, while continuing internal work with more now- and near-term bio-based solutions such as ethanol and butanol, ideally from cellulosic – stalks, leaves and woody matter – feedstocks.

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