

Fuel from fiber -- Pretreatment can put corn stalks, trees in your car's tank

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"Put a tree in your tank." Fuel companies aren't touting that slogan. At least not yet.

But thanks to research done in part by Bruce Dale, Michigan State University professor of chemical engineering and materials science, making fuels from poplar trees and corn stalks is becoming more efficient and cost-effective.

Dale is internationally known for his 30 years of research on making ethanol from plant biomass – the stems, leaves, stalks and trunks of plants and trees usually discarded as waste after a crop is harvested. He's developed a patented pretreatment process for biomass, ammonia fiber expansion (AFEX), which makes the breakdown of cellulose – the most difficult part of making ethanol from plant biomass – more efficient.

Dale and other members of the Biomass Refining Consortium for Applied Fundamentals and Innovation will discuss AFEX and other biomass pretreatment technologies during a presentation today at BIO2007, the annual international convention of the Biotechnology Industry Organization. The consortium is a group of scientists studying biomass refining.

"In time, we can expect to completely replace gasoline and diesel with cellulose-derived biofuels that are cheaper, better for the environment and much better for national security than petroleum-derived fuels," Dale said.

Source: Michigan State University

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