

SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP



**(in)**



## Biochar used successfully to treat fracking water

Post Date: 19 September 2014



Researchers at the Southwest Research Institute (SwRI) in Texas and the University of Texas at San Antonio (UTSA) in the US have determined that biochar, a substance produced from plant matter, is a safe, effective and inexpensive method to treat flowback water following hydraulic fracturing, or fracking.

Flowback water treatment is a critical sustainability issue for the oil and gas industry. One to five million gallons of water mixed with sand and chemicals are required for the fracking of each well. Once the water is used, the flowback, or wastewater, must be treated to remove hazardous chemicals before it is stored, reused or disposed, which can be a costly endeavor. Using biochar could help oil and gas companies save money and responsibly treat flowback water for reuse. This is particularly important in areas where water resources are scarce.

UTSA mechanical engineering professor Zhigang Feng, senior research engineer in SwRI's Chemistry and Chemical Engineering Division Maoqi Feng, and four UTSA students have been creating biochar and testing it on water samples.



24 September 2014



SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP

Biochar is made from materials such as wood chips, paper, leaves, soybean oil, corn oil and other forms of agricultural waste which are heated to high temperatures in an oxygen-deprived environment to form a stable charcoal-like solid. The substance attracts and retains water, absorbing impurities such as hydrocarbons, organics, biocides and certain inorganic metal ions.

UTSA's Zhigang Feng said. "Our research demonstrates that this is a product that can reduce the environmental impact of drilling in a way that is safe and inexpensive to industry."

Currently, biochar is used commercially to improve soil quality by helping soils retain nutrients and water. The research team plans to seek additional research funding as well as partnerships with biochar companies to help make the product marketable to the oil and gas industry.

-----  
Richard P. Vlosky, Ph.D.  
Director Louisiana Forest Products Development Center  
Crosby Land & Resources Endowed Professor of Forest Sector Business Development  
Room 227, School of Renewable Natural Resources  
Louisiana State University  
Baton Rouge, LA 70803  
Phone (office): (225) 578-4527  
Fax: (225) 578-4251  
Mobile Phone: (225) 223-1931

