Biodiesel on the wing: A 'green' process for biodiesel from feather meal

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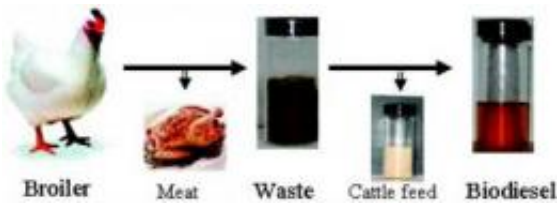

Discarded chicken parts may provide an abundant source of biodiesel fuel, scientists say. Credit: The American Chemical Society

Scientists in Nevada are reporting development of a new and environmentally friendly process for producing biodiesel fuel from "chicken feather meal," made from the 11 billion pounds of poultry industry waste that accumulate annually in the United States alone. Their study is scheduled for the July 22 issue of ACS' *Journal of Agricultural and Food Chemistry*.

In the study Mano Misra, Susanta Mohapatra, Narasimharao Kondamudi, and Jason Strull note that chicken feather meal consists of processed chicken feathers, blood, and innards that have been processed at high temperatures with steam. Currently feather meal is used as animal feed and fertilizer because of its high protein and nitrogen content. With as much as 12 percent fat content, feather meal has potential as an alternative, nonfood feedstock for the production of biofuel, the report says.

The researchers describe a new process for extracting fat from chicken feather meal using boiling water and processing it into biodiesel. Given the amount of feather meal generated by the poultry industry each year, they estimate this process could create 153 million gallons of biodiesel annually in the U.S. and 593 million gallons worldwide. In addition, they note that removal of fat content from feather meal results in both a higher-grade animal feed and a better nitrogen source for fertilizer applications.

More information: "A Green Process for Producing Biodiesel from Feather Meal" Journal of Agricultural and Food Chemistry

Source: American Chemical Society (news : web)