Advanced Biofuels USA

507 North Bentz Street
Frederick, MD 21701

Advanced Biofuels USA Receives USDA Rural Business Development Grant for Feasibility Study of Eastern Shore Energy Beet-to-Jetfuel Project

For Immediate Release, September 7, 2016: Frederick, Maryland -- The U.S. Department of Agriculture has provided $16,893 to Advanced Biofuels USA, a Maryland based 501(c) 3 nonprofit educational organization, for a feasibility study of producing bio-jetfuel from energy beets grown on the Eastern Shore of Maryland. The study will look at the technical and economic aspects of a project being developed by the **University of Maryland Eastern Shore (UMES)**, **Purdue University**, and Maryland small businesses. Also of importance to the economic feasibility of this project are co-products that can provide economic opportunities to rural communities on the Eastern Shore when jetfuel prices are low due to fluctuating petroleum markets.

In addition, UMES will explore the uptake of Eastern Shore legacy phosphates by the energy beets. If this can be demonstrated, the beets-to-bio-jetfuel project could be a cost-effective approach to reducing Chesapeake Bay nutrient runoff from the long-term use of poultry litter as fertilizer.

Also, UMES will be looking at using the proteins from the biomass as potential high value poultry feed or other animal feed.

Unique Maryland-based innovations of the bio-jetfuel project include non-food, low nutrient input energy beets developed by **Plant Sensory Systems, LLC** of Baltimore and a proprietary enzyme conversion system that utilizes the entire biomass of the energy beet root, including biomass ignored during conventional sugar production. This process has been developed by **Atlantic Biomass, LLC** and **Hood College**, both located in Frederick, Maryland.

The objective of the Advanced Biofuels USA study is to determine if the 1st stage data produced from the UMES energy beet pilot crop and commercial simulation processing shows that the crop and supply-chain have enough yield and production advantages that investments should be made to overcome hurdles identified in the feasibility analysis in order to take the project to commercialization.

In addition, the energy beet feasibility study will look at priorities identified in the White House's National Science and Technology Council's report *Federal Alternative Jet Fuels Research and Development Strategy*. The funding of this feasibility study by the Maryland/Delaware USDA Office of Rural Development is part of the action plan USDA, the Departments of Energy, Transportation, and the US Navy are following to develop sustainable bio-based jetfuel to replace fossil fuel without the need to modify aircraft engines and fuel distribution infrastructures. Priorities included for analysis by this study will include:

1. Does this approach to advanced biofuel production have the basic elements to improve the rural economic conditions of the Eastern Shore counties of Maryland?
2. Can this process be optimized to improve job creation and profit opportunities?
3. Can the project reduce the cost of meeting Maryland Chesapeake Bay nutrient remediation costs?

***Advanced Biofuels USA**, a nonprofit educational organization advocates for the adoption of advanced biofuels as an energy security, military flexibility, economic development and climate change mitigation/pollution control solution. Our key tool is our web site, www.AdvancedBiofuelsUSA.org, a resource for everyone from opinion-leaders, decision-makers and legislators to industry professionals, investors, feedstock growers and researchers; as well as journalists, teachers and students. In addition, we prepare technology and policy assessments, brief government staff, participate in conferences, lecture, and provide general assistance to those interested in advanced biofuels. Technology neutral and feedstock and product agnostic, Advanced Biofuels USA's work is respected around the world.*

For more information: Joanne Ivancic, Executive Director 301-644-1395 Cell: (301) 524-6841 Email: info @ advancedbiofuelsusa.org

Photos of first harvest at University of Maryland Eastern Shore, August 18, 2016.

Plant Sensory Systems' Steve Lipsack (left) and University of Maryland Eastern Shore students, Babatunde Carter (center) and Stanley Meli, identify and categorize beets as they are harvested at UMES field.

Example of energy beet held by Robert Kozak, President, Atlantic Biomass.

UMES students Nancy Chepueter (standing left), Beatrice Chebet (seated), and Even Reeves (in hoodie) and Plant Sensory Systems scientists, Kathleen Turano (standing at scale) and Jeffrey Shipp (in background at juicer) work in field lab weighing, measuring and analyzing a dozen varieties of energy beets grown at UMES.

On the chopping block- example of energy beet harvested at UMES test plot.

Photos: J. Ivancic

The full press release is at http://advancedbiofuelsusa.info/advanced-biofuels-usa-receives-usda-rural-business-development-grant-for-feasibility-study-of-eastern-shore-energy-beet-to-jetfuel-project/

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