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Agriculture and Energy Departments Announce New Investments to Drive Innovations in Biofuels and Biobased Products

WASHINGTON – As part of the Obama Administration's all-of-the-above strategy to enhance U.S. energy security, reduce America's reliance on imported oil and leverage our domestic energy supply, while also supporting rural economies, the U.S. Departments of Agriculture (USDA) and Energy today announced a \$41 million investment in 13 projects that will drive more efficient biofuels production and feedstock improvements.

"If we want to develop affordable alternatives for oil and gasoline that will help reduce our dependence on foreign oil, we need investments like these projects to spur innovation in bioenergy," said Agriculture Secretary Tom Vilsack. "By producing energy more efficiently and sustainably, we can create rural jobs, boost rural economies and help U.S. farmers, ranchers and foresters prosper."

"As part of President Obama's all-of-the-above strategy to deploy every available source of American energy, we continue to strive for more efficient, cost-competitive technologies to produce U.S. energy," said Energy Secretary Steven Chu. "The investments announced today are helping to accelerate innovation across America's growing biofuels industry, which will help to reduce our dependence on imported oil and support job creation across rural America."

New Biomass Research and Development Initiative Investments

Through the joint Biomass Research and Development Initiative (BRDI), USDA and the Energy Department are working to develop economically and environmentally sustainable sources of renewable biomass and increase the availability of renewable fuels and biobased products. The five projects announced today will help to diversify the nation's energy portfolio and replace the need for gasoline and diesel in vehicles.

The cost-shared projects include:

• **Quad County Corn Cooperative** (\$4.25 million – Galva, Iowa). This project will retrofit an existing corn starch ethanol plant to add value to its byproducts,

which will be marketed to the non-ruminant feed markets and to the biodiesel industry. This project enables creation of diverse product streams from this facility, opening new markets for the cooperative and contributing to the U.S. Environmental Protection Agency's goals for cellulosic ethanol production and use.

- Agricultural Research Service's National Center for Agricultural Utilization Research (\$7 million - Peoria, Illinois). This project will optimize rapeseed/canola, mustard and camelina oilseed crops for oil quality and yield using recombinant inbred lines. Remote sensing and crop modeling will enhance production strategies to incorporate these crops into existing agricultural systems across four ecoregions in the Western United States. The oils will be hydrotreated to produce diesel and jet fuel.
- **Cooper Tire & Rubber Co.** (\$6.85 million Findlay, Ohio). Guayule is a hardwood perennial natural rubber-producing shrub grown in the semi-arid southwestern United States. This project will optimize production and quality of guayule rubber using genomic sequencing and development of molecular markers. The extracted rubber will be used in tire formulations, and the remaining plant residue will be evaluated for use in biopower and for conversion to jet fuel precursors.
- University of Wisconsin (\$7 million Madison, Wisconsin). This project will utilize dairy manure as a source of fiber and fertilizer. Fiber will be converted to ethanol, manure used for fertilizer, and oil from the crops will be converted to biodiesel used in farm equipment. The project goal is to develop closed-loop systems with new product streams that benefit the environment.
- **University of Hawaii** (\$6 million Manoa, Hawaii). This project will optimize the production of grasses in Hawaii, including napier grass, energycane, sugarcane and sweet sorghum. Harvest and preprocessing will be optimized to be compatible with the biochemical conversion to jet fuel and diesel.

Additional information on the Biomass Development and Research Initiative is available <u>HERE</u>.

Leveraging Genomics for More Efficient, Cost-Effective Bioenergy

Today, the Energy Department and USDA are also announcing \$10 million for eight research projects aimed at applying biomass genomics to improve promising biofuel feedstocks and drive more efficient, cost-effective energy production. These projects will use genetic mapping to advance sustainable biofuels production by analyzing and seeking to maximize genetic traits like feedstock durability, how tolerant feedstocks are to various environmental stresses, and the potential for feedstocks to be used in energy production. A full list of the projects selected today is available <u>HERE</u>. The projects selected today include:

- **Michigan Technological University** (\$1.1 million Houghton, Michigan). This project will analyze genetic traits that affect wood biomass yield and quality in the *Populus* species, including poplar trees.
- **Iowa State University** (\$1.4 million Ames, Iowa). Research will explore the genetic architecture of sorghum biomass yield component traits identified using field-based analysis of the feedstock's physical and genetic traits.

Since 2006, the Plant Feedstocks Genomics for Bioenergy research program has invested nearly \$70 million helping to identify key genes affecting biomass yield and quality in feedstocks and to accelerate breeding efforts to improve bioenergy-relevant traits.

More information is available <u>HERE</u>.

The Energy Department also released today a new video, <u>Biofuels 101</u>, highlighting how technological advances are increasing biofuel efficiency and reducing production costs.

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