

USDA Update: Building the Biobased Economy



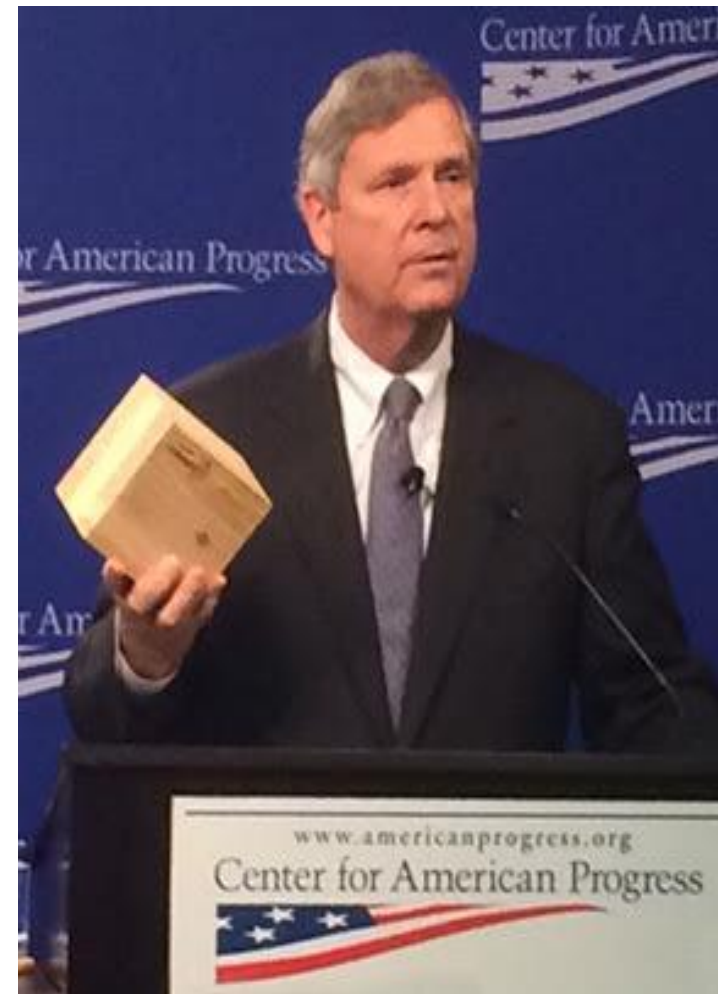
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USDA Rural Development

BIOMASS RESEARCH AND DEVELOPMENT
TECHNICAL ADVISORY COMMITTEE PUBLIC MEETING
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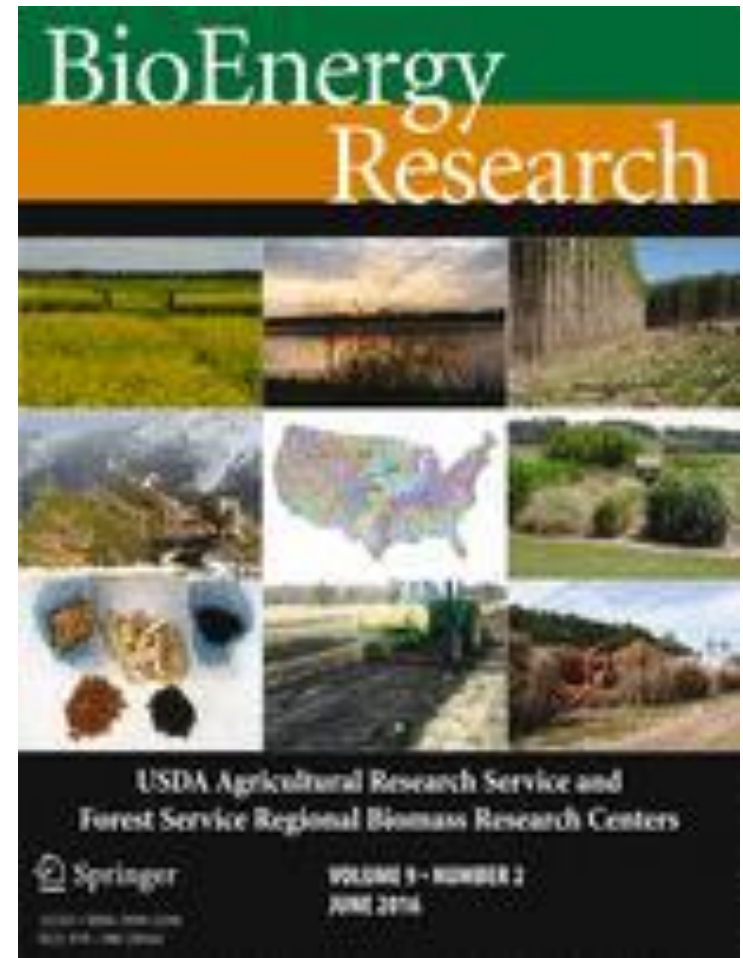
Progress Report on USDA's Building Blocks for Climate Smart Agriculture and Forestry

- USDA has a long history of cooperative conservation and partnerships with farmers, ranchers, and forestland owners. The principles that have guided USDA's cooperative conservation efforts also apply to each of these building blocks, and actions taken through this initiative will be:
 - Voluntary and incentive-based
 - Focused on multiple economic and environmental benefits
 - Designed to meet the needs of producers
 - Cooperative and focused on building partnerships
 - Measured to evaluate progress
- Biofuel, bioenergy as well as biogas with livestock partnerships are included in the 10 “Building Blocks”
- First results of USDA's Building Blocks for Climate Smart Agriculture and Forestry, Implementation Plan and Progress Report can be found at:
<http://www.usda.gov/documents/building-blocks-implementation-plan-progress-report.pdf>




USDA Regional Biomass Research Centers

- Special Edition of BioEnergy Research reviews the research accomplishments of Agriculture Research Service and Forest Service on biomass and bioenergy.
- The first 12 articles of issue encapsulate much of the research that was reported by the USDA Regional Biomass Research Centers since their inception in 2010.
- For a electronic copy of the report, use the following link: [Volume 9, Issue 2, June 2016 Special Edition of BioEnergy Research](#)



“Algae + Papaya = Biofuel”

- *Highlights ARS research from Hilo, Hawaii.*
 - Examines conditions which *Chlorella protothecoides* algae can be coaxed into producing oil from discarded papayas, other unmarketable crops or byproducts, like glycerol
 - Zero-waste system could use 9 million pounds of unmarketable papayas, represents substantial revenue loss for growers
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- Offer a way to recoup some of those losses with production of animal feed and oil for fuel
 - Research utilizes bioreactors, which currently grow 150 liters of algae
 - The team plans to use UTEX 249, a top-performing strain of *C. protothecoides* that can store as much as 60 percent its cellular weight in lipids when grown, in the absence of sunlight, on a diet of 35 percent papaya juice.
 - More information at: <http://agresearchmag.ars.usda.gov/2016/apr/algaloil/>

“Cotton Disposable Disinfecting Wipes”

- *Highlights research team from ARS Cotton Chemistry and Utilization Research Unit out of New Orleans, LA.*
- Disposable disinfecting wipes made from synthetic fibers are popular because they are convenient/effective, but decompose slowly in landfills.
- New chemical formulas block quats from adhering strongly to the surface of cotton fibers in disposable wipes.
- Cotton wipe releases with “ADBAC” quats for surface disinfection and is also strong, abrasive, and fully biodegradable.
- Efficacy tests were conducted using Good Laboratory Practice (GLP) standards that are required for Environmental Protection Agency registration of new disinfecting products, killed all four control microorganisms as well as MRSA and VRE.
- More information at: <http://agresearchmag.ars.usda.gov/2016/jun/wipes/>



More to come on USDA R&D covering the Biomass Research and Development Initiative (BRDI)

- Additional presentation from Dr. Daniel Cassidy with the National Institute for Food and Agriculture (NIFA)
- USDA, DOE Invest \$10 Million in joint biomass research through the [Biomass Research and Development Initiative](#) (BRDI), Recipients of USDA funding include:
 - University of California-Riverside, Riverside, Calif., \$1,297,725
 - University of Montana, Missoula, Mont., \$1,403,868
 - North Carolina Biotechnology Center, Durham, N.C., \$1,873,987
 - Dartmouth College, Hanover, N.H., \$1,849,940
 - State University of New York College of Environmental Science and Forestry, Syracuse, N.Y., \$906,722
- The Department of Energy funded projects by Ohio State University and the Massachusetts Institute of Technology.

More to come on USDA R&D covering the Agriculture and Food Research Initiative (AFRI)

- Additional presentation from Dr. Bill Goldner with National Institute for Food and Agriculture (NIFA)
 - \$21M available through [Sustainable Bioenergy and Bioproducts challenge area](#), which creates or sustains jobs by enhancing existing food and fiber production systems, boosts ecosystems by reducing greenhouse gases and improving water and habitat quality, and providing renewable energy, chemical, and product options.
 - First area, USDA Expects to make awards for up to four Regional Bioenergy Coordinated Agricultural Projects awards-
 - grants must not exceed \$15M total, \$3M/year, including indirect costs, for project periods up to 5 years
 - Letters of intent due July 14, full application deadline Sept. 22.
 - Second area is focused on preparing new generation of students, faculty and a workforce for emerging opportunities
 - Applications due July 14. USDA expects to make up to three awards, with the grants <\$3 million total, including indirect costs for projects periods up to 4years.

Biomass Crop Assistance Program (BCAP)

- Provides financial assistance to farmers who establish and maintain new crops of energy biomass, or harvest and deliver forest or agricultural residues to a USDA-approved facility that creates energy or biobased products.
- In FY2016, \$3 million is available with a portion provided to two existing projects in New York and Ohio/Pennsylvania to expand acres planted to shrub willow and giant miscanthus.
- Farmers and forest owners may enroll for establishment and maintenance for these two projects from June 15 to Sept. 13.
- From June 15 to Aug. 4, USDA will accept applications from foresters and farmers seeking incentives to delivery biomass from fields or national forests to energy generation facilities.
- Retrieval payments are provided at a dollar for dollar match match, up to \$20 per dry ton for eligible materials including corn residue, diseased or insect-infested wood materials, or orchard waste.
- More at www.fsa.usda.gov/bcap or contact a FSA county office.

Farm Storage Facility Loan Program

- Farm Service Agency will provide a new financing option to help farmers purchase portable storage and handling equipment
- The loans, which now include a smaller microloan option with lower down payments, are designed to help producers, including new, small and mid-sized producers, grow their businesses and markets.
- The FSFL program also offers a new “microloan” option, which allows applicants seeking less than \$50,000 to qualify for a reduced down payment of five percent and no requirement to provide three years of production history.
- Farms and ranches of all sizes are eligible.
- Eligible program commodities include renewable biomass
- To learn more about Farm Storage Facility Loans, visit www.fsa.usda.gov/pricesupport or contact a local FSA county office. To find your local FSA county office, visit <http://offices.usda.gov>.

Advanced Biofuel Payment Program (Sec. 9005)

- \$8.8 million awards made, through Rural Development, to biofuels producers based on the amount of advanced biofuels produced from renewable biomass, other than corn kernel starch.
- Examples of eligible feedstocks include crop residue, food and yard waste, vegetable oil and animal fat.
- Eligible fuels include wood pellets, biodiesel, advanced and cellulosic ethanol, and biogas.
- A full list of advanced biofuel producers that received payments through the current round of funding can be downloaded at the following link:
http://www.rd.usda.gov/files/RD_AdvBiofuelsChart_2016.pdf

Rural Energy for America Program (REAP)

- 26 grants awarded for nearly \$1.9 million through the REAP Energy Audit and Renewable Energy Development Assistance program to help rural small businesses and agricultural producers across rural America conserve energy and develop renewable energy systems, reducing their carbon footprint and lowering operational costs.
- For example in Athens, Ohio, the Southeast Ohio Public Energy Council will use a \$100,000 Renewable Energy Development Assistance grant to conduct solar, geothermal and anaerobic digestion site assessments for up to 100 businesses.
- Since the start of the Obama Administration, USDA has provided more than \$11.8 million to 136 recipients of the REAP Energy Audit and Renewable Energy Development Assistance program, which has benefitted almost 3,000 rural small businesses and agricultural producers.
- A full list of recipients can be found at the following link:
http://www.rd.usda.gov/files/RD_REAPEnergyAudit_05_2016.pdf

Wood Innovations Grant Program

- \$8.5 million in awards, through Forest Service, to expand and accelerate technologies and strategies that promote the use of wood in heat and power generation, commercial construction, and other wood product innovations that also benefit forest health.
- 42 projects funded, 18 increase wood energy markets and 24 are focused on expanding wood products markets.
- Project address a wide ranges of issues including replacing coal with torrefied wood at power plants, establishing district energy systems, and identifying market opportunities for beetle-killed trees.
- A full list of the 42 projects that were awarded through this round of funding can be downloaded from the [Forest Service Wood Education and Resource Center website](#).

Value Added Producer Grant (VAPG)

- \$44 million available to farmers, ranchers and businesses through Value-Added Producer Grant program for economic planning activities or for working capital expenses related to the processing and/or marketing of valued-added products.
- For example, new digester proposals may include renewable energy generation components as well as post-digestion components as value-added projects, while proposals for existing digesters may include post-digestion components only. [More information on biogas on the USDA website.](#)
- Electronic applications for this round of funding are due June 24; Paper applications must be submitted by July 1.
- Additional information on funding and application process is available on the [Federal Register website.](#)

Thank you!



For more information on USDA Energy and Bioeconomy
Programs, visit:

www.usda.gov/energy
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