

REGIONAL APPROACHES TO SUSTAINABLE BIOENERGY SYSTEMS

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Region-based production systems are needed to produce the feedstocks that will be turned into the biofuels required to meet Federal mandated targets. Executive and Legislative actions have put into motion significant government responses designed to advance the development and production of domestic biofuels and other biobased products. Thirty-six billion gallons of biofuels must be blended with U.S. transportation fuels by 2022. With more than 12 of the 15 billion gallons of corn grain ethanol presently being produced, careful planning for the expansion of a biomass sector must be done now because the land and financial resources required to produce the next 21 billion gallons of advanced biofuels is significant – an estimated 24 million acres of dedicated feedstock crops and \$160 billion to build the needed biorefineries. Increased USDA extramural support brings together robust industry, academic, and government partnerships through the NIFA Agriculture and Food Research Initiative (AFRI) *Sustainable Bioenergy Challenge* Coordinated Agricultural Projects (CAP) program and is coordinated with expanded ARS and Forest Service (FS) intramural research through the regional *USDA Biomass Research Centers* based on directions given by the President's Interagency Working Group report *Growing America's Fuels*. This coordination builds on USDA's research strengths nationwide to help ensure dependable supplies of feedstocks are available for the production of advanced biofuels to meet legislated goals and market demands using an integrated regional systems approach. Continued research and development for woody biomass crop genetic improvement, as well as innovative sustainable production and logistics are key elements to the potential of a number of sustainable regional biomass systems.