

PRAIRIE POLY CULTURES AND LOCAL BIOENERGY

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Abstract: Establishment of prairie grasses and forbs on the agricultural landscape can protect and enhance soil and water resources, biodiversity, and wildlife habitat. Much of the current university and corporate research on perennial bioenergy crops focuses on increasing yields of a few grass species grown in monocultures. Other scientists, including speakers at this symposium, are studying the role that prairie polycultures can play in the emerging bio-economy. As farmers begin to grow perennial grasses as an energy crop, there will be opportunities for collaborative research and demonstration projects to evaluate synergies and trade-offs for co-production of bioenergy feedstock and environmental benefits. This paper presents a framework for conducting this R&D and, in the process, helping to create a Local Bioenergy system that draws on key lessons and business models from the Local Food movement.

AWI's economic analysis of a potential energy grass market in Central Illinois found that payments for ecosystem services will be needed to augment the BTU-based price of dedicated energy crops. We are in the second year of a Local Bioenergy Initiative that includes assistance to farmers and landowners to begin growing energy grasses, demonstration of landscape design concepts for perennial energy crops, and establishment of local markets for biomass and related ecosystem services. The presentation will cover promising concepts to enhance both economic viability and ecological benefits of prairie polycultures grown for bioenergy. I will also discuss use of stakeholder/expert learning groups to share knowledge and perspectives associated with these new cropping systems and management practices.