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U.S. Department of
Transportation



Project Title: **Evaluate CRP Land Potential for Biomass
Feedstock Production**

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Rationale

The Sun Grant Initiative (SGI) is working with the Department of Energy- Energy Efficiency and Renewable Energy Office of Biomass Program to develop and implement a Regional Biomass Partnership to address barriers associated with the development of a sustainable and predictable supply of biomass feedstocks. Close to million acres of CRP land in the State of Oklahoma offer potential land for growing bioenergy feedstocks for cellulosic ethanol industry.

There have been concerns from environmental groups about possible impact these minimally managed CRP ecosystems have on the natural habitat for birds and other organisms acclimated to the land. Timing and management of biomass harvest so as to avoid the nesting and breeding seasons of the wildlife in these areas or provide a continued habitat would be beneficial. This can be achieved by strip harvesting or staggering the harvest. In this study, we propose two harvest timings: one at peak standing crop and the other after frost kill. These harvest times would be useful to monitor the changes in the native habitat during the five year period of the project.

Project Goal

- 1) Replicate the SGI/DOE project at Altus, OK to evaluate biomass potential across locations.
- 2) Evaluate changes in soil's physical and chemical properties of CRP land during the feedstock production period.

Project Outcomes

Addition of nitrogen to the CRP land increased biomass production at a rate of 15 kg biomass per kg of N added. The dry biomass yields were 1884, 3072 and 3559 kg ha⁻¹ at 0, 55 and 110 kg N ha⁻¹.



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