

Regional Feedstock Partnership Highlights—Conservation Reserve Program (CRP)

The Regional Feedstock Partnership identified grasslands planted under the CRP retirement program as a potential bioenergy feedstock. Accordingly, replicated field trials have been completed on CRP land using field scale agricultural practices in order to assess the yield potential and suitability of CRP grassland for bioenergy.

Environment and Precipitation: This field scale experiment demonstrated the potential of sustainable biomass feedstock production of CRP lands estimated in the 2005 Billion Ton Study. April-June precipitation was a good indicator of annual CRP biomass feedstock production across all regions, and annual feedstock production was severely reduced when April-June precipitation was below 50% of average. By far, the greatest impact on seasonal biomass production and changes in vegetation composition were due to variations in on-site precipitation.

Harvest management: Timing of biomass harvest did not greatly affect stand health or long-term biomass production. Production was consistent under different harvest regimes demonstrating the potential flexibility in harvest management of CRP land in order to minimize environmental impacts.

Fertility: In general, nitrogen (N) fertilization increased biomass feedstock production. However, N fertilization had a significant impact on species composition on CRP land with legume components. N efficiency of applied fertilizer was lower on CRP land that contained legumes compared with CRP without legume species. Economic analysis for comparing N fertilization versus legume mixtures should be conducted to maximize profitability.



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