

Regional Feedstock Partnership Highlights—Switchgrass

Switchgrass was identified as a key species with potential for use as a dedicated bioenergy feedstock. It offers a number of distinct benefits including broad adaptation, improved soil conservation and quality, reduced greenhouse gas emissions, carbon sequestration, and high yield potential on land marginal to row crop production. The primary objective of this project was to establish yield potential and quality parameters for switchgrass grown in different environments using field-scale agricultural practices.

Field Scale Trials: All switchgrass field trials have been conducted using field-scale equipment, thus harvest losses and yield results are “real”. To our knowledge this is the first trial of this scope to be done on field scale plots. Other large trials have been completed but not with the geographic distribution.

Persistence and Yield: Yields have ranged from 1 to more than 5 tons/acre across locations and years. Although switchgrass is a highly persistent perennial grass, very few studies have gone beyond three years. To date, as a result of the Partnership, we have harvested switchgrass for five years at four of the six locations and four years at another. Yield has increased or remained constant across years at each field trial, thus demonstrating the robust yield potential of this species across environments and over time.

Yield and Drought: Switchgrass has a deep root system that provides some protection from drought. This was particularly evident in 2012 when, despite drought conditions across much of the US, switchgrass yields at each field trial location were equal to or greater than previous years.



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