

Evaluation of Summer Switchgrass and Selected Prairie Cordgrass, 2008

Ezra Aberle

The evaluation of devoting land to biomass production for biofuels has been somewhat limited in this region. This study was initiated as a preliminary investigation to determine the potential biomass production of promising species of grasses for this area. The study was conducted at two locations. One site was on poor soil that had been disturbed for construction several years ago and the other was an intact site adjacent to existing biomass trials. The study tests potential for cellulosic biomass production of Summer Switchgrass and a selection of Prairie Cordgrass. The trial was planted in 2007 and was harvested November 4, to determine yield and harvest moisture.

Location had a significant impact on yield (Table 2) whereas species had a significant impact on moisture at cutting (Table 1). There was no interaction between location and species (Table 3).

Table 1. Species effect on moisture at harvest.

Species	Harvest Moisture %	Biomass Weight Dry T/ac
Prairie Cordgrass (SD germplasm)	0.4	3.6
Summer Switchgrass	0.1	3.6
Mean	0.2	3.6
C.V. (%)	25.5	6.5
LSD 0.05	0.1	NS

Table 2. Location fertility effect on biomass production.

Location	Harvest Moisture %	Biomass Weight Dry T/ac
Good Soil	0.2	4.6
Poor Soil	0.2	2.5
Mean	0.2	3.6
C.V. (%)	25.5	6.5
LSD 0.05	NS	0.3

Table 3. Location and species effect on biomass production.

Location	Species	Harvest Moisture %	Biomass Weight Dry T/ac
Good Soil	Prairie Cordgrass (SD germplasm)	0.3	4.6
Good Soil	Summer Switchgrass	0.1	4.6
Poor Soil	Prairie Cordgrass (SD germplasm)	0.4	2.5
Poor Soil	Summer Switchgrass	0.1	2.6
Mean		0.2	3.6
C.V. (%)		25.5	6.5
LSD 0.05		NS	NS

Species are an improvement over current CRP fields and current grass hay fields in terms of overall yield.



Switchgrass variety evaluation, September, 2008.