



Cropping Systems Other

Antrim County

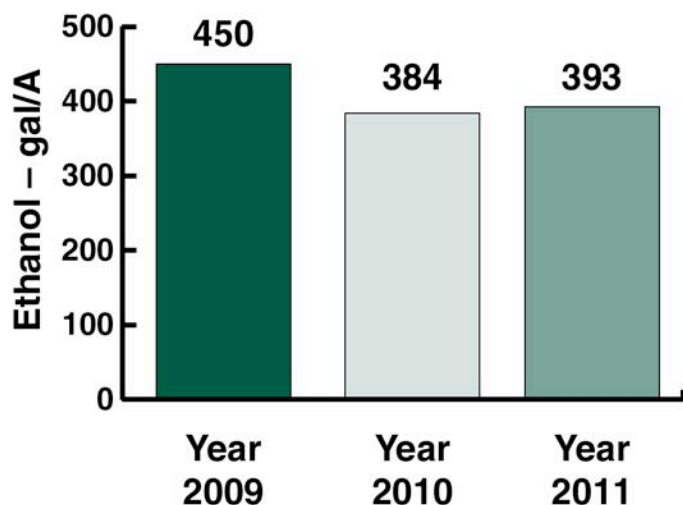
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AgBioResearch

County	Antrim
Cooperator	Stan Moore
Nearest town	Torch Lake
Soil type	Emmet-Onaway Sandy Loam
Weed control	None
Fertilizer	Switchgrass: 152 lbs/A 46-0-0 (70 lbs. actual N)
Exp. design	RCB, 4 replications

	2009	2010	2011
Yield – tons dry matter/A	5.3	4.5	4.6
Ethanol ¹ – gal/A	450	384	393
¹ tons/A X 85 gal/ton = gal. ethanol/A			



Biofuel productivity plots

Purpose

Evaluate biofuel crop productivity on various soils and micro climates across Michigan.

Materials and methods

Cave-in-Rock switchgrass was established in May 2008. Yield data was not collected during the establishment year. Glyphosate (1 qt/A) was applied prior to seeding to control weeds. After the crop was up, 0.5 pounds quinclorac/A was applied to control weeds. No herbicide was applied in 2010 or 2011. No fertilizer was applied in the seeding year (soil test results showed P and K levels in maintenance region). Each successive year, 70 pounds of actual N was applied in the spring.

Results and discussion

Switchgrass has significant potential as a biomass crop in northern Michigan. Switchgrass offers benefits including low fertility requirements, perennial crop (doesn't need tillage or planting operations every year) and sequesters carbon which helps build soil productivity even when removing above ground biomass. Switchgrass can be used to make liquid transportation fuel (ethanol, butanol) or can be combusted (burned) to generate heat or electricity. These characteristics make switchgrass a universal bioenergy crop that is well adapted to northern Mich.

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