

Miscanthus: A greenhouse opportunity? (preliminary data)

Kalamazoo County



MICHIGAN STATE
UNIVERSITY

Extension *maes* research

Cropping Systems
Other

Purpose

Compare current propagation practice to transplanting plugs started in greenhouse.

Treatments

m-root = bare roots planted directly into field

m-trans = plugs (4" square) transplanted into field

Hypothesis

Planting plugs will produce higher yields and reduce the time to mature yields.

Miscanthus bare roots that were planted directly into the field had 29.5 percent mortality in the year it was planted. Mortality in the second year was similar. This is a real problem that will need to be addressed for large-scale planting of miscanthus.

Transplanted miscanthus plants had a higher number of tillers per plant in year 1 and year 2. The plants generally showed higher plant vigor. The time to reach a full mature stand will be shortened when transplants are used.

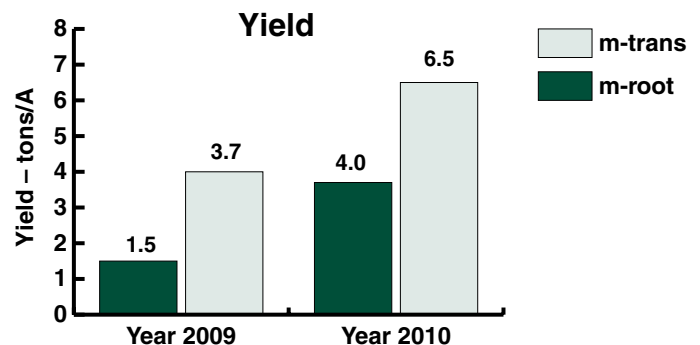
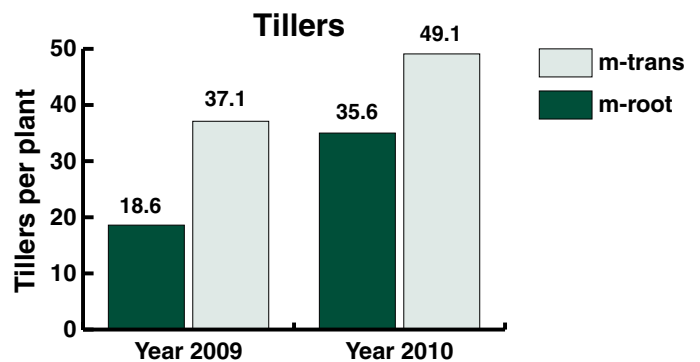
In 2010 transplants yielded 6.5 tons of dry matter per acre compared with 4.0 tons dry matter per acre for the bare root miscanthus.

Discussion

Use caution when drawing conclusions from this project. While it appears that transplants are superior to bare roots for establishing miscanthus, the costs of starting the plants in the greenhouse also needs to be evaluated. We need to look at 3-4 years of data and include economics before we draw a final conclusion.

Sponsored by Project GREEN and Energy Biosciences Institute.

County	Kalamazoo
Cooperator	W.K. Kellogg Biological Station
Nearest town	Hickory Corners
Soil type	Kalamazoo sandy loam
Planting date	June 2009
Weed control	None
Fertilizer	95 lbs. N (207 lb/A 46-0-0)
Exp. design	RCB, 4 replications



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