

2012 LTER Agronomic Protocol Kellogg Biological Station

Main Site Treatment 5: Perennial Biomass Poplar Trees Management Summary Sheet

Growing Season: 2012 Poplar trees planted in May 2009.

Rotation: Continuous Poplar Trees – Rotation 1 – planted 1988, harvested 1999 and 2008; Rotation 2 – planted May 2009
 Tillage: None
 Variety: Poplar clones: Rotation 1 – DN-34 C.V. Eugenei (*P. nigra* x *P. deltoids*); Rot. 2 – NM-6 *Populus nigra* x *Populus maximowiczii*

A good source for information or questions on the poplar trees is Ray Miller from the MSU Forest Biomass Innovation Center (906) 786-1575, rmiller@msu.edu, www.maes.msu.edu/fbic/

Operations Applied Last Year:

Fertilizer: Broadcast ammonium nitrate CAN 27 (27-0-0) at 518 lbs/A (140 lbs N/A)

Operations and Fertilizer Applied This Year:

Tillage: None
 Fertilizer: Ammonium nitrate CAN 27 (27-0-0) N will be applied to the N4 and N5 micro-plot areas of T5 (Please see next page for micro-plot area in T5 plots).

Weed/Insect Control:

Preemergence: None

Soil Sample Analysis: Results are from samples taken in the autumn of 2010.

pH:	<u>R1 6.0, R2 6.0, R3 6.2, R4 6.3, R5 5.8, R6 5.9</u>	Magnesium (Mg): ppm	<u>R1 153, R2 150, R3 189, R4 147, R5 136, R6 108</u>
Lime Index:	<u>R1 69, R2 69, R3 69, R4 70, R5 68, R6 68</u>	Calcium (Ca): ppm	<u>R1 806, R2 837, R3 1119, R4 893, R5 771, R6 874</u>
Nitrogen (N):	_____	C.E.C.: (meq/100 g)	<u>R1 6.9, R2 7.0, R3 8.8, R4 6.1, R5 7.7, R6 7.9</u>
Phosphorus (P): ppm	<u>R1 43, R2 37, R3 50, R4 59, R5 29, R6 64</u>	% O.M.:	_____
Potassium (K): ppm	<u>R1 144, R2 134, R3 163, R4 155, R5 103, R6 104</u>	Others:	_____

Fertility -- Fertilizer Recommendation: (soil analysis lab) Recommendations based on *Trees, deciduous – nursery.*

Lime ton/A:	<u>Avg. = 0.4: R1 0, R2 0, R3 0, R4 0, R5 1.3, R6 1.3</u>	K ₂ O lb/A:	<u>Avg. = 169: R1 150, R2 170, R3 115, R4 130, R5 225, R6 225</u>
Nitrogen lb/A*:	<u>Avg. = 240: R1 240, R2 240, R3 240, R4 240, R5 240, R6 240</u>	Other:	_____
P ₂ O ₅ lb/A:	<u>Avg. = 0: R1 0, R2 0, R3 0, R4 0, R5 0, R6 0</u>		

***NOTE** Maximum suggested single nitrogen application is 50 lbs per acre. Fertilizer application in August is not recommended

Differences from Prior Rotations: _____

Comments: _____

We will talk about adding fertilizer after the next tree harvest.

Dr. Donald Dickmann, from the MSU Forestry Department, was involved with the first planting of the poplar trees in 1988 so he understands the LTER and more specifically the treatment 5 protocol. Dr Dickmann's contact info: (517) 353-5199, dickman1@msu.edu, Dr Dickmann is retired but still checks e-mail and phone messages.

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Sources for replanting sticks: 1. Randy or Paul from the MSU Forestry Department on campus. (517) 353-2036. or 2. Hramor Nursery 2267 Merkey Rd. Manistee, MI (231) 723-4846

This is a working protocol used for planning purposes. Due to potential changes in chemicals, fertilizer, varieties planted, planting dates etc...
 please refer to the agronomic field log for actual field operations that take place during 2012.