

Developing Biomass Crop Production Systems for Eastern Cottonwood and Black Willow in the Lower Mississippi Alluvial Valley

US Forest Service, Southern Research Station

Theodor D. Leininger	}	– Stoneville, MS
Ray A. Souter		
Emile S. Gardiner		
Jennifer Knoepp	}	– Otto, NC
Dana Mitchell		
Robert B. Rummer		



Mississippi State University, MS

Randy Rousseau



Louisiana Tech University, Ruston, LA

Michael C. Tyree

Wilson Hood



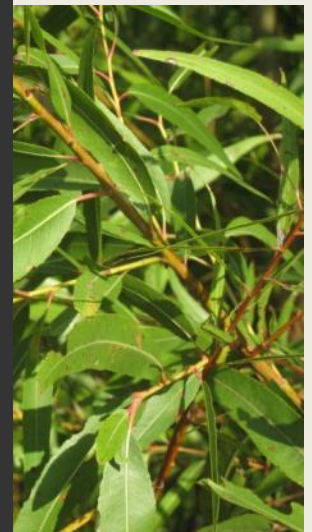
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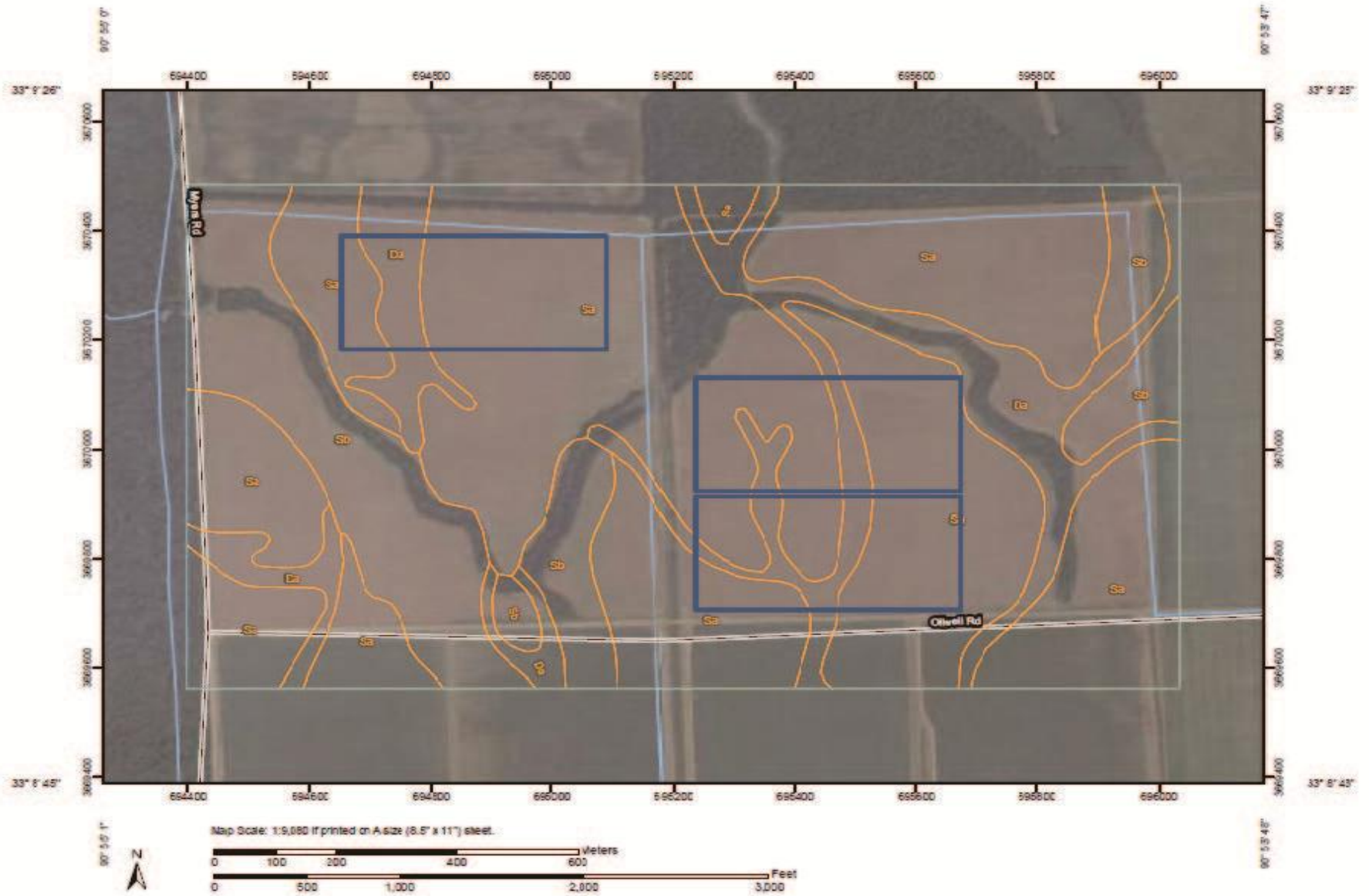
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Soil Map—Washington County, Mississippi



Objectives

“If something has value, the landowner will produce it”

Bob Emory

Weyerhaeuser, November 6, 2012

- Belowground carbon efflux
- Aboveground biomass
- Fuel consumption

3x3

Orange : 3 x 3 Spacing

6 ft between double rows
2.5 ft separate double row pairs
2.5 ft between trees within rows

.5 ft offset 1st row from plot edge
no offset 1st tree from plot edge

20 double rows
265 trees per row

10600 trees/plot

7x2.5

Red : 7 x 2.5 Spacing

7 ft between rows
2.5 ft between trees within rows

2 ft offset 1st row from plot edge
no offset 1st tree from plot edge

24 rows
265 trees per row

6360 trees/plot

9x6

Pink : 9 x 6 Spacing

9 ft between rows
6 ft between trees within rows

1.5 ft offset 1st row from plot edge
no offset 1st tree from plot edge

19 rows
111 trees per row

2109 trees/plot

12x12

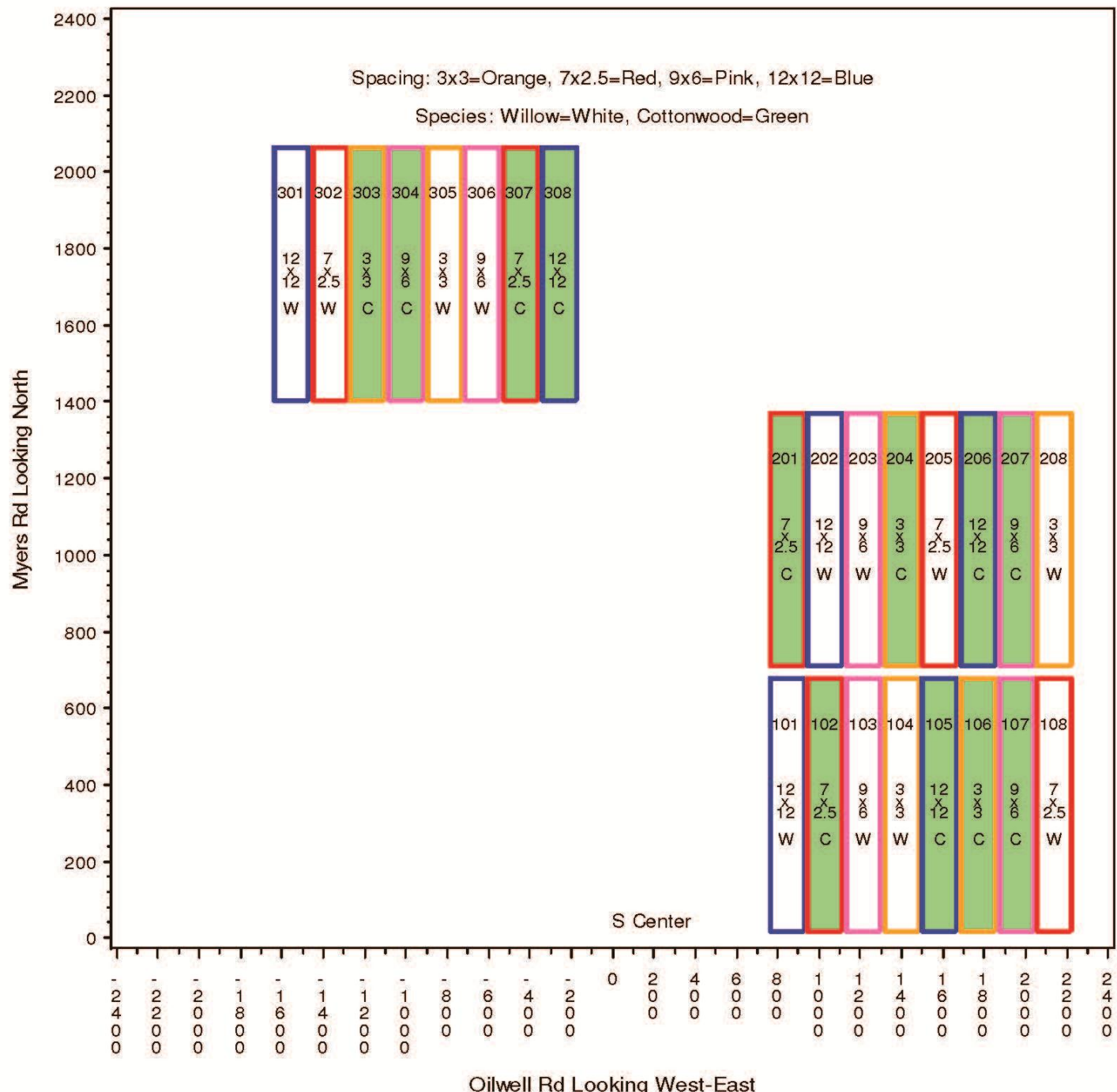
Blue : 12 x 12 Spacing

12 ft between rows
12 ft between trees within rows

4.5 ft offset 1st row from plot edge
no offset 1st tree from plot edge

14 rows
56 trees per row

784 trees/plot









Block Location



Legend

● Cluster Location

□ Block

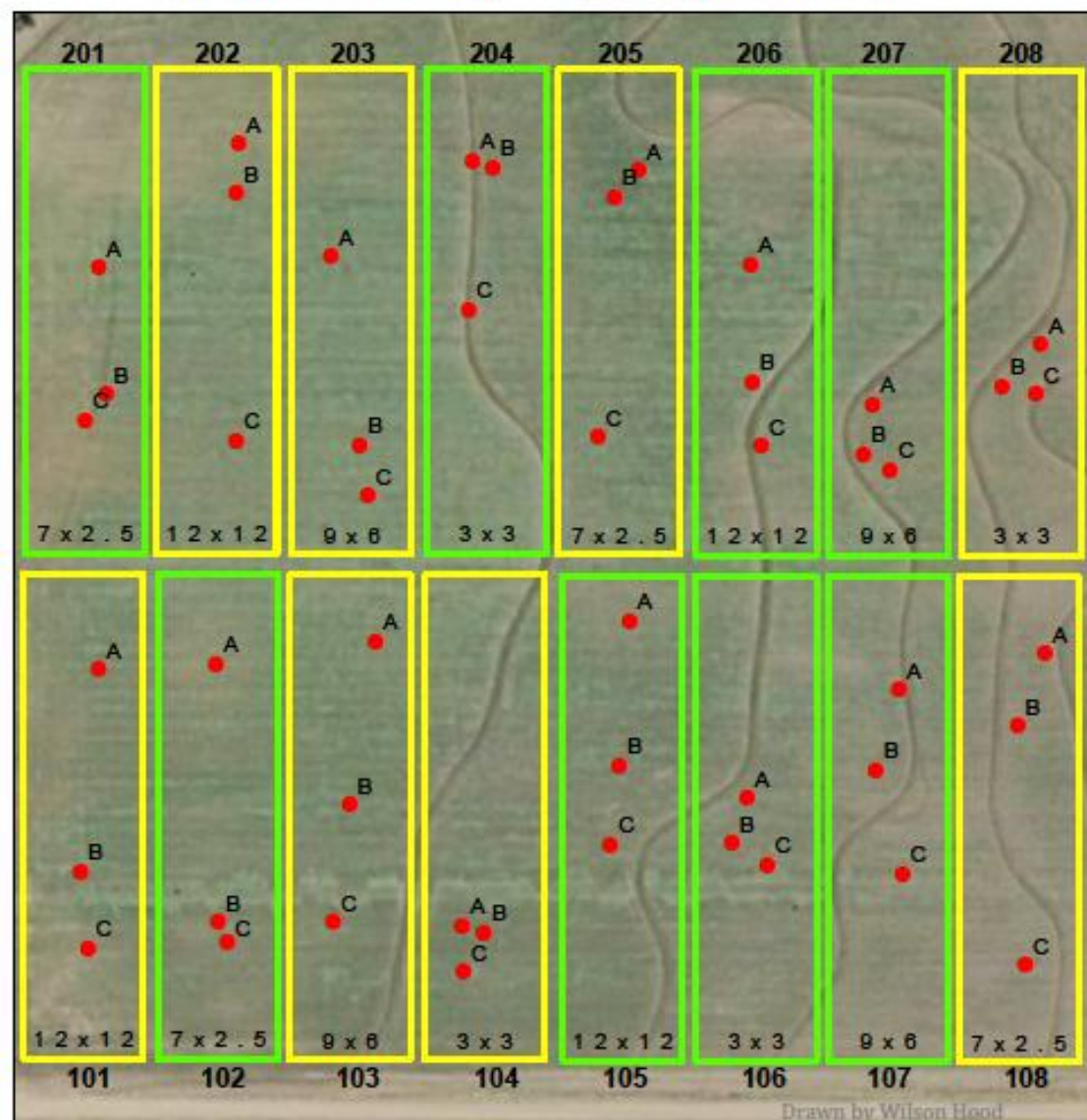
Species

□ E. Cottonwood

□ Black Willow



Short-Rotation Woody Crop Study: Blocks 1 & 2



Drawn by Wilson Hood

1 cm = 27 meters

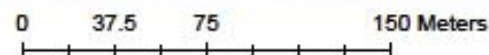






Table: Initial Sprouting Success and First-year Survival, Hollandale SRWC Study

Species				
	Spacing	Sprouting	Survival	
Cottonwood	3x3	98.32	95.85	
	7x2.5	99.62	99.23	
	9x6	100.00	100.00	
	12x12	100.00	100.00	
Willow	3x3	100.00	92.43	
	7x2.5	99.63	99.25	
	9x6	100.00	99.09	
	12x12	100.00	100.00	

Hollandale SRWC Study planted February 27, 2012

Sprouting success measured May 14, 2012; First-year survival measured October 24, 2012