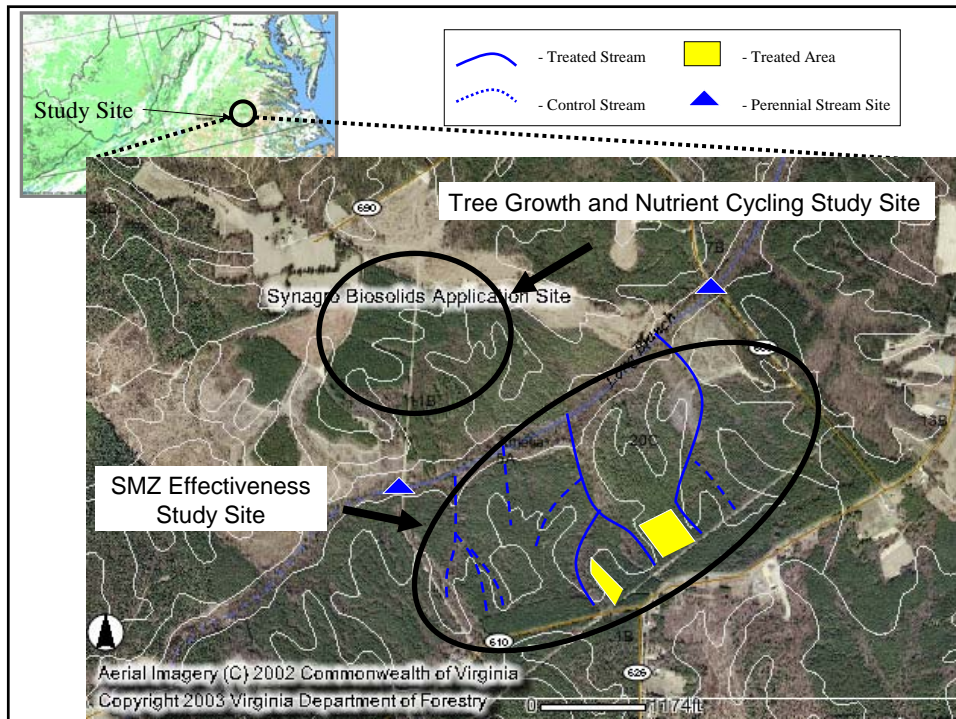


Tree Growth Response, Nutrient Dynamics and Water Quality Following Land Application of Biosolids to Forests in Virginia

Eduardo Arellano
Aaron Pratt
Thomas Fox

Land Application of Biosolids Workshop
Wednesday, May 30, 2007



Tree Growth Response and Nutrient Dynamics Following Land Application of Biosolids to Forests in Virginia

- **Objectives:** To identify nutrient cycling dynamics following land application of biosolids on pine plantations. To determine the growth response of loblolly pine following the application of biosolids.

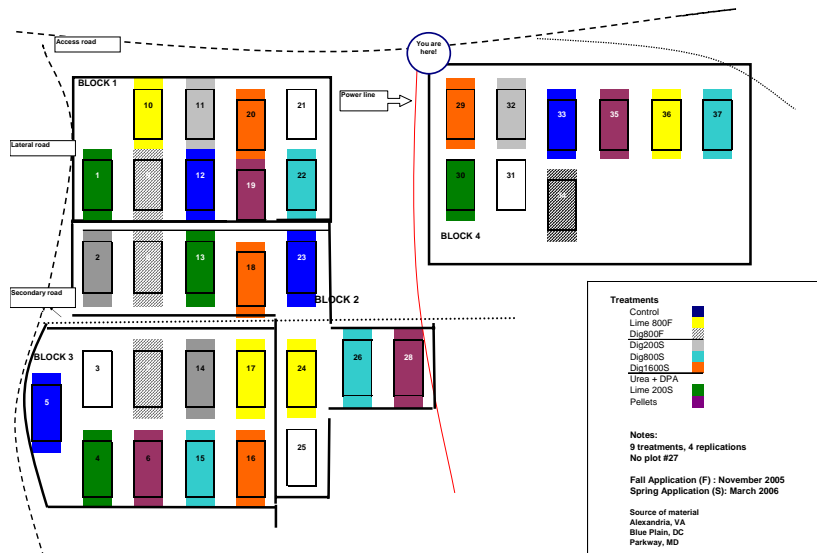
Treatments	Dry Weight (Tons/acre)	Carbon (Tons/acre)	Total N (Tons/acre)	PAN (lb/acre)	pH
<i>Fall Application</i>					
Lime Stabilized (1)	42.3	14.8	1.5	880	12.4
Anaer. Digested	31.5	9.8	1.57	935	8.2
<i>Spring Application</i>					
Lime Stabilized	10.3	3.6	3.8	220	12.2
Pellets	1.08	-	-	230	-
Urea + DPA	-	-	-	209	-
Anaer. Digested	7.7	2.4	0.4	223	8.5
Anaer. Digested	33.5	10.4	1.7	943	8.5
Anaer. Digested	62.6	19.4	3.1	1820	8.5



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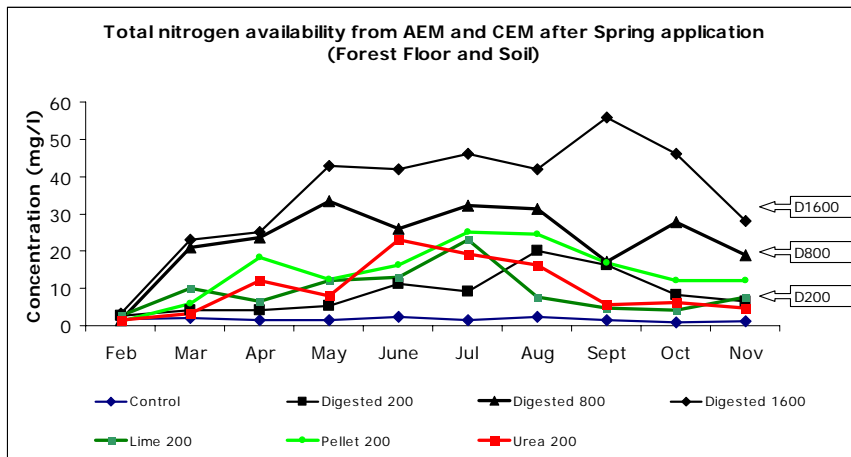
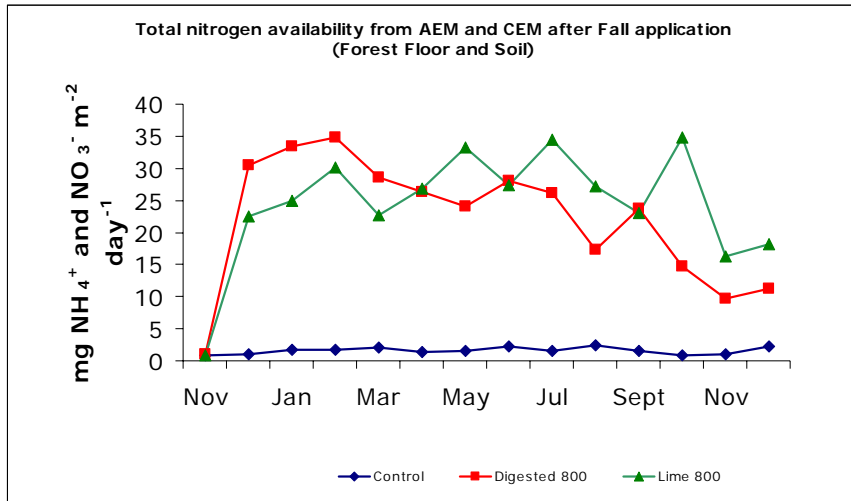
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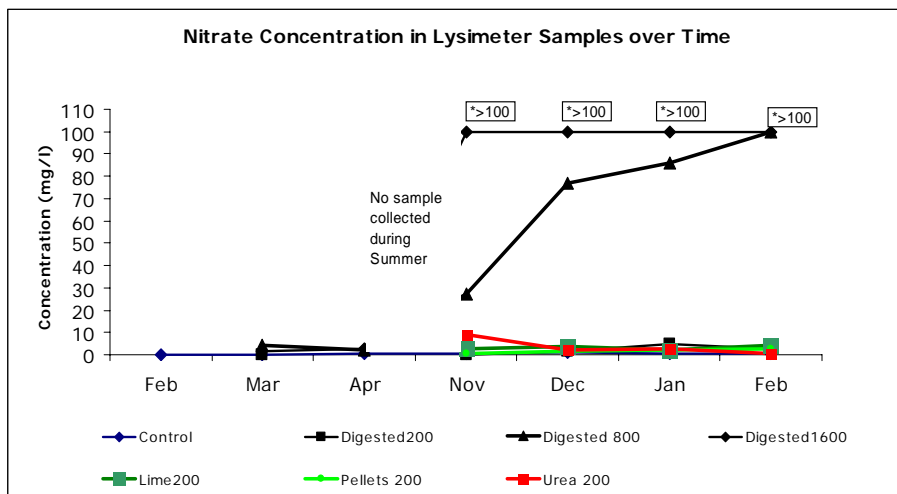
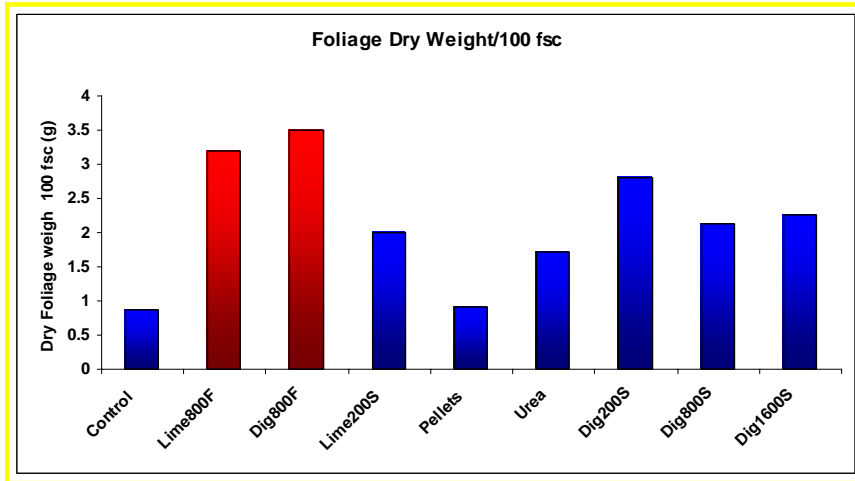
Workshop on Land Application of Biosolids in Virginia
May 30th, 2007



Land Application of Biosolids
Workshop May 30, 2007

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Effectiveness of Streamside Management Zones (SMZs) to Protect Water Quality Following Land Application of Biosolids

Objectives: To determine the effectiveness of stream management zones to protect water quality following forest land application of biosolids.

Sampling activities

- **Where?**
 - In stream
 - Across streamside management zone (SMZ)
- **When?**
 - Every two weeks
- **What?**
 - Replace cation and anion exchange membranes in forest floor and soil
 - Samples from suction lysimeters
 - Grab samples from streams

