Bayleton Alternative Study

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What is the single most important chemical that you use in your nursery?

If you did not have this chemical, you could not grow trees.

Treatments

	Foliar Treatments		Seed Treatments	
	1x	2x	1x	2x
Heritage® azoxystrobin	11 oz ai/ acre	22 oz ai/ acre	2 oz ai / 50 lb seed	4 oz ai/ 50 lb seed
Medallion® fludioxonil	9 oz ai / acre	18 oz ai / acre	2 oz ai / 50 lb seed	4 oz ai/ 50 lb seed
Folicur 3.6 F® tebuconazole	4 fluid oz ai/ acre	8 fluid oz ai / acre	200 fluid oz ai / 50 lbs seed	400 fluid oz ai / 50 lbs seed
Bayleton DF® triadimefon	2 oz ai / acre		1 oz ai / 50 lb seed	-

Study Specifics

- Foliar study:
  - March 13, 2006 sowed Loblolly in Ray Leach Tubes that had been stratified for 4 weeks.
  - 6 replications of 20 seedlings = treatment unit
  - May 1, 2006 foliar treatments were applied in the pesticide spray tunnel at the AU Pesticide Research Facility.

Study Specifics

- Seed Application Study
  - Seed treatments applied to Loblolly and sowed in Ray Leach Tubes on April 19, 2006.
  - 6 replications of 20 seedlings = treatment unit

Study Specifics

- May 11,2006 all seedlings were taken to USDA Rust Screening Laboratory in Asheville.
- May 16, 2006 seedlings were challenged with 25,000 spores of *Cronartium quercum f.sp. fusiforme* using standard inoculation protocols

Results to date

Seedling infection as measured by percentage of trees with galls at 3 months

	Foliar Treatments		Seed Treatments	
	1x	2x	1x	2x
Heritage® azoxystrobin	38%	45%	18%	14%
Medallion® fludioxonil	50%	44%	35%	23%
Folicur 3.6 F® tebuconazole	45%	45%	0%	0%
Bayleton DF® triadimefon	12%		0%	
Control (non treated)	44%		36%	

Future Studies

- Need to re-test Folicur
- Other fungicides to test:
  - Dividend Extreme – similar MOA to Bayleton + Subdue
  - Eagle (Systhane) – currently is labeled to control Fusiform Rust on pines – but has not been tested?
  - Others –

Controlling Nematodes Between Fumigations

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Before Treatment

After Treatment

Study Objectives

- What nematicides can we apply on land currently in pine production that will not kill the pines?
- What level of nematicides can be used to effectively reduce the nematode populations?
- Will the seedling quality be affected as a result of the treatments?

Study Specifics

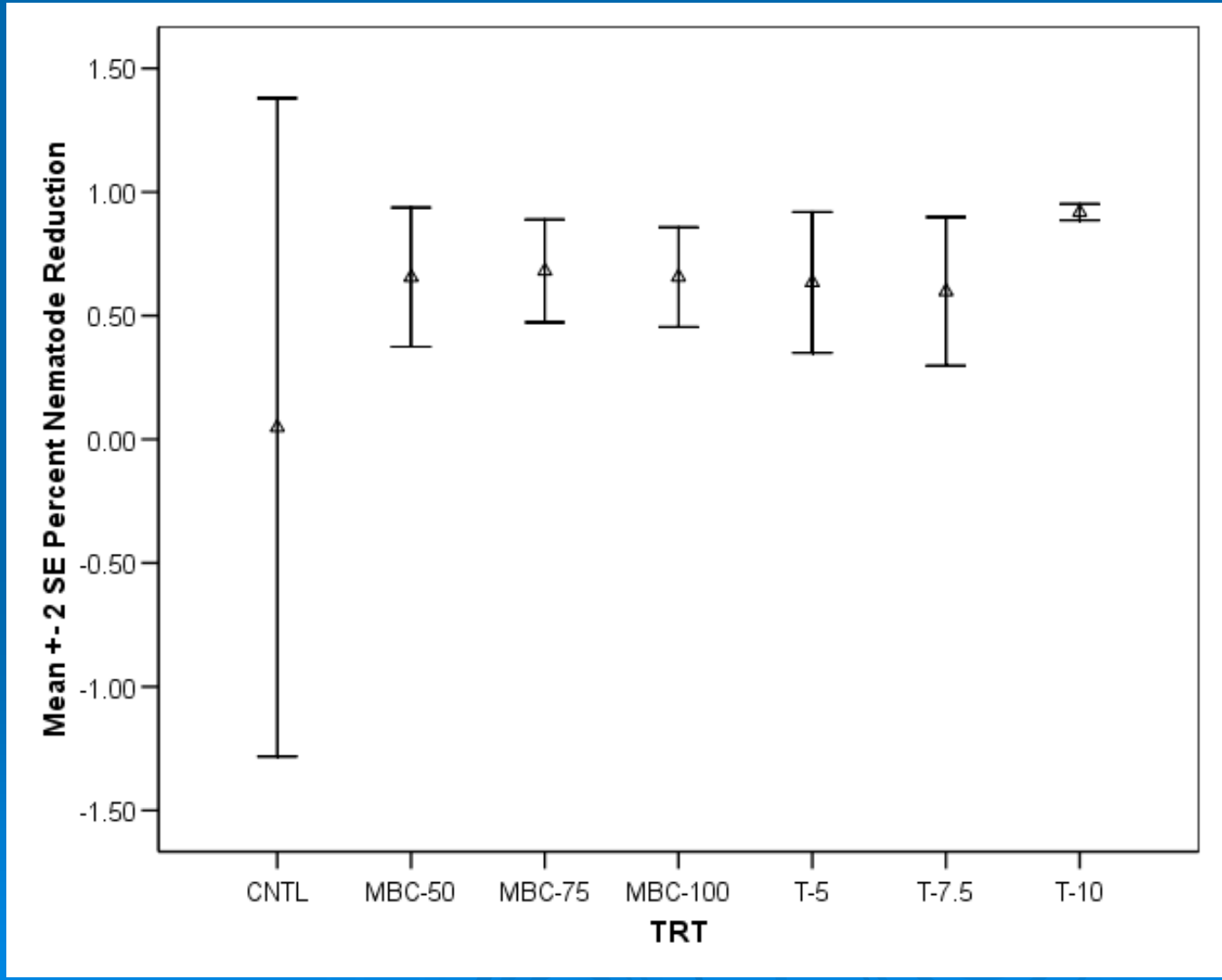
- Put in July 31,2006 – Glennville, GA
- Treatments: - replicated 4 times
  - Control
  - Telone II® @ 5 gal/acre
  - Telone II® @ 7.5 gal/acre
  - Telone II® @ 10 gal/acre
  - MBC 70/30® (70% 98/2 Mbr/Chl & 30% solvent) @ 50 lbs/acre ai
  - MBC 70/30® (70% 98/2 Mbr/Chl & 30% solvent) @ 75 lbs/acre ai
  - MBC 70/30® (70% 98/2 Mbr/Chl & 30% solvent) @ 100 lbs/acre ai

Stunt Nematode Reduction by Treatment

TRT	Pre Trt	Post Trt	% Reduction
MBC-50	302[1]	73	65.60%
MBC-75	278	80	68.10%
MBC-100	140	37	65.60%
T II-5	160	50	63.40%
T II-7.5	381	113	59.80%
T II-10	244	20	91.80%
Control	203	101	4.90%

[1] Nematode levels recorded per 100 cc of soil

Variation by Rep



Seedling data

TRT	Density (ft^2)	RCD (mm)	Height (in)	Root Bio (g)	Shoot Bio (g)	Total Bio (g)
MBC-50	17.5 a	4.8	7.9 b	0.5	3.0 abc	3.5 ab
MBC-75	14.3 bc	4.8	8.4 ab	0.5	3.1 abc	3.6ab
MBC-100	16.7 ab	4.7	8.3 b	0.5	2.8 c	3.3 b
T II-5	13.9 c	4.8	8.5 ab	0.5	3.1 abc	3.6 ab
T II-7.5	16.6 ab	4.7	8.9 a	0.5	3.3 a	3.8 a
T II-10	16.0 abc	4.8	8.3 ab	0.4	2.9 bc	3.3 ab
Control	17.0 a	4.7	8.4 ab	0.4	3.3 ab	3.7 ab

Cost ±

TRT	Approx Cost / acre
MBC-50 lbs ai / a	$710
MBC-75 lbs ai / a	$820
MBC-100 lbs ai / a	$928
T II-5 gal / a	$560
T II-7.5 gal / a	$590
T II-10 gal / a	$620

Prices depend upon travel and acreage