

NEMATICIDE TRIAL 2021 INSTALLATION

SFPMC 2022 CONTACT MEETING
JULY 18, 2022


 Southern Forest
Nursery Management Cooperative

Nina Dowling Payne

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2021 NEMATICIDE TRIAL

- Second SFPMC non-fumigant nematocide trial (purpose is to **extend** fumigation, not replace)
- One fungicide aka nematocide: Broadform™ fluopyram 21.4% + trifloxystrobin 24.4%
- same nursery as 2020 trial – ArborGen Bullard TX nursery
- maximum allowable application per acre per year: 27.1 oz.
- applied in nematode hot spot in field last fumigated in 2019
- 2 treatments: 0 sprays - control
3 sprays - 8 oz/ac at sowing + 11 oz/ac 21 DAT + 8 oz/ac 21 DAT

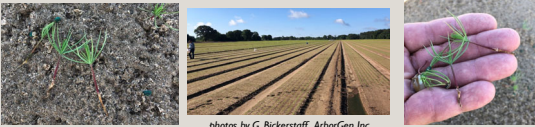


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2021 NEMATICIDE TRIAL

- Nursery staff: purchased Broadform™
laid out trial plots
made 3 Broadform™ applications
took soil samples 5 times May through September
made germination counts
collected seedling samples

did all the work!



photos by G. Bickerstaff, ArborGen Inc.

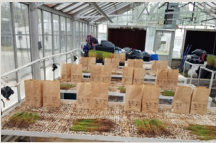
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2021 NEMATICIDE TRIAL

- Coop staff: took soil samples for processing to AU nematode lab



measured seedlings at end of season and analyzed results



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2021 Bareroot loblolly pine seedling characteristics treated with fluopyram (Broadform™)

Treatment	June 2021 density/ft ²	Dec 2021 density/ft ²	Shoot height (cm) ¹	Root collar diameter (mm) ¹	Shoot dry weight (g)	Root dry weight (g)
Control	25.3 ± 0.80	29.2 ± 1.09	24.7 ± 0.93	5.36 ± 0.06	3.81 ± 0.08	0.94 ± 0.03
3 applications Broadform™	26.0 ± 0.67	27.9 ± 0.80	22.4 ± 0.53	5.09 ± 0.07	3.58 ± 0.11	0.96 ± 0.09
p>f	0.528	0.328	0.018	0.014	0.166	0.629

¹Bold means within a seedling characteristic indicate significant treatment difference from that of the nontreated control at that rate according to Dunnett's T-test at alpha = 0.05.

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2021 Nematode populations in control plots and Broadform™-treated plots

Soil Sampling Date	CONTROL mean number of nematodes per plot	TREATMENT mean number of nematodes per plot
5/12/2021	38.4	47.8
6/2/2021	26.2	30.2
6/21/2021	10.0	12.2
8/3/2021	10.4	29.3
9/22/2021	16.2	21.3
Mean	20.2	28.2

*Nematode pressure was not high enough in 2021 to adequately test the product's efficacy on nematode control

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2022 NEMATICIDE TRIAL

- Third trial installed at IFCO Jesup, GA Nursery in loblolly and slash pine
- 2 treatments:
0 sprays – control
3 sprays - 9 oz/ac 14 days after sow + 9 oz/ac 14 DAT + 9 oz/ac 14 DAT
- As of June, post-treatment nematode counts:
control plots range from 6 to 218/100 cc soil
treatment plots range from 4 to 84/100 cc soil
- Soil samples will be collected and processed through August, seedling samples will be collected, measured, and analyzed at end of growing season



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RESEARCH REPORT 22-02

A SECOND TRIAL TO DETERMINE THE EFFECT OF MULTIPLE APPLICATIONS
OF A NON-FUNGICIDE NEMATICIDE (FLUPYRIMID) ON NEMATODE
CONTROL AND LOBLOLLY PINE SEEDLING CHARACTERISTICS

by
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QUESTIONS?

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