

# Alternative chemicals for rust control and fumigation trial update

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# Fusiform rust - Proline® rate study



## 2017 seed treatment study

Fungicide	Manufacturer	Active Ingredient
Bayleton®	Bayer Cropscience	Triadimefon - 50%
Proline® 480SC	Bayer Cropscience	Prothioconazole – 41.0%

This year – 2 species of pine

- Loblolly
- Slash

## What has happened to date

- Fungicide treatments applied on seed at Auburn Laboratories
- Seed sent to Asheville, NC Rust Lab
- Seed sown and 3 weeks post germination
- Seedlings challenged with rust spores
- 4 month evaluations made by NC Rust Center



## Rates of Proline® tested

	1x rate	0.5 x rate	0.25 x rate	0.125 x rate	0.0625 x rate
Control (water)	N/A				
Bayleton®	8 oz/ac				
Proline ®	10 fl oz/ac	5 fl oz/ac	2.5 fl oz/ac	1.25 fl oz/ac	0.625 fl oz/ac







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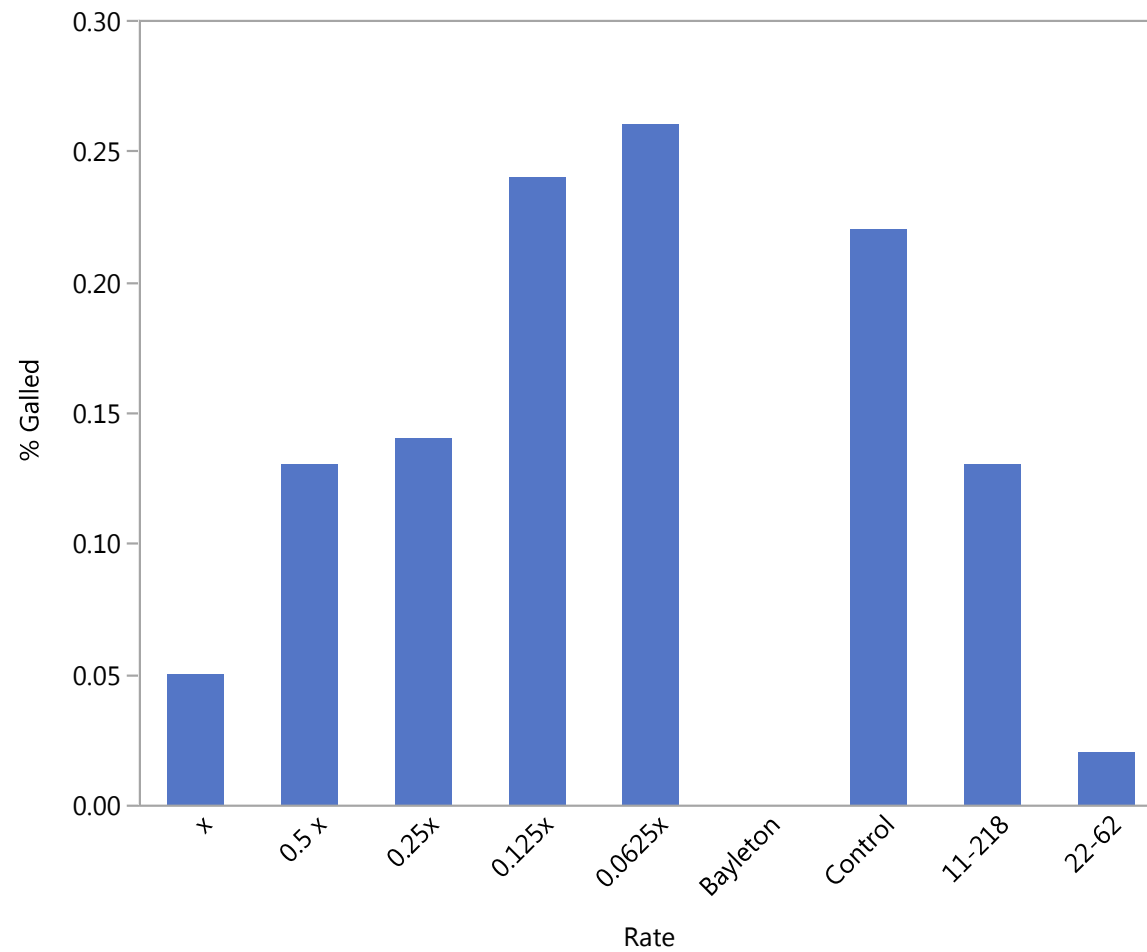
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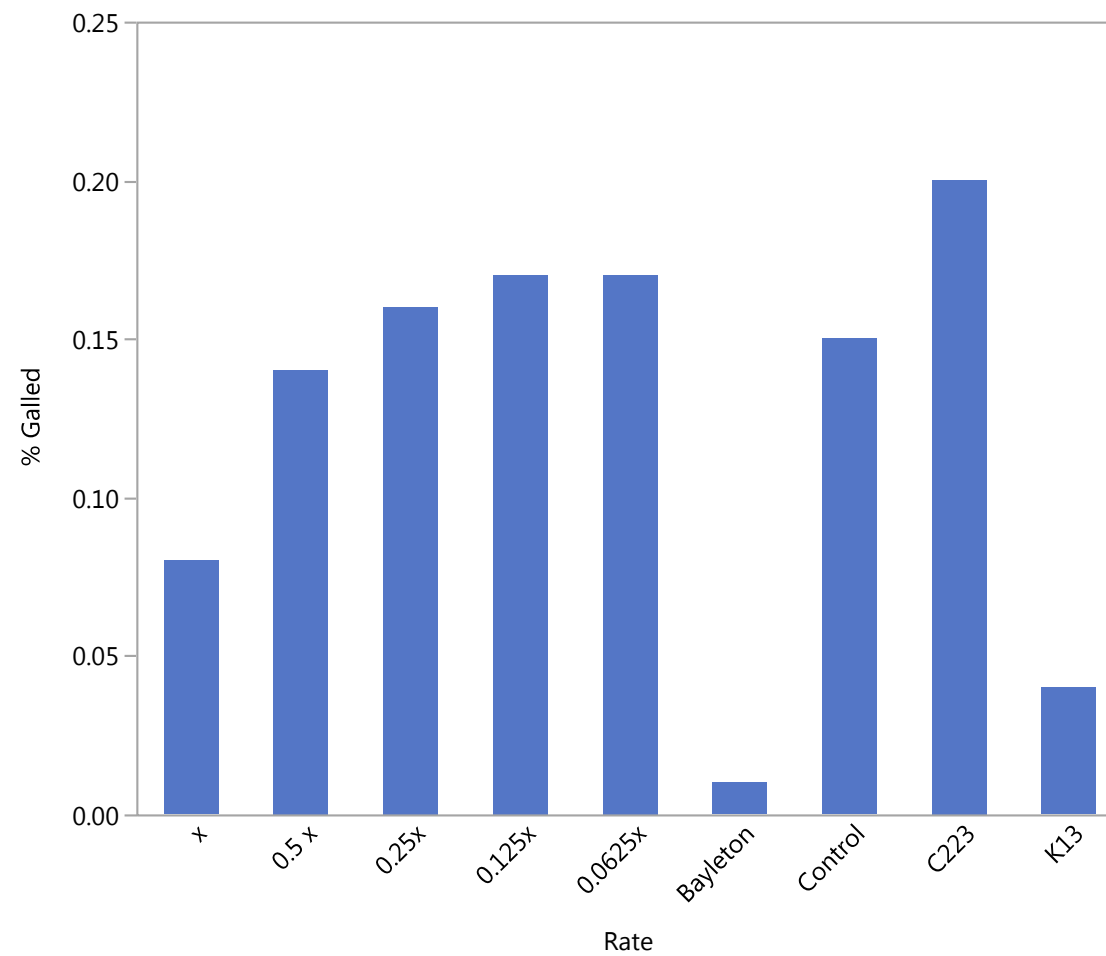


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# Loblolly foliar infection



# Slash foliar infection



# Fusiform rust - alternative compounds



## 2017 seedling treatment study

Fungicide	Manufacturer	Active Ingredient
Bayleton®	Bayer Cropscience	Triadimefon - 50%
Compass®	Bayer Cropscience	Trifloxystrobin – 50%
Compass®	Bayer Cropscience	Propiconazole – 11.4% Trifloxystrobin – 11.4%

This year – 2 species of pine

- Loblolly
- Slash

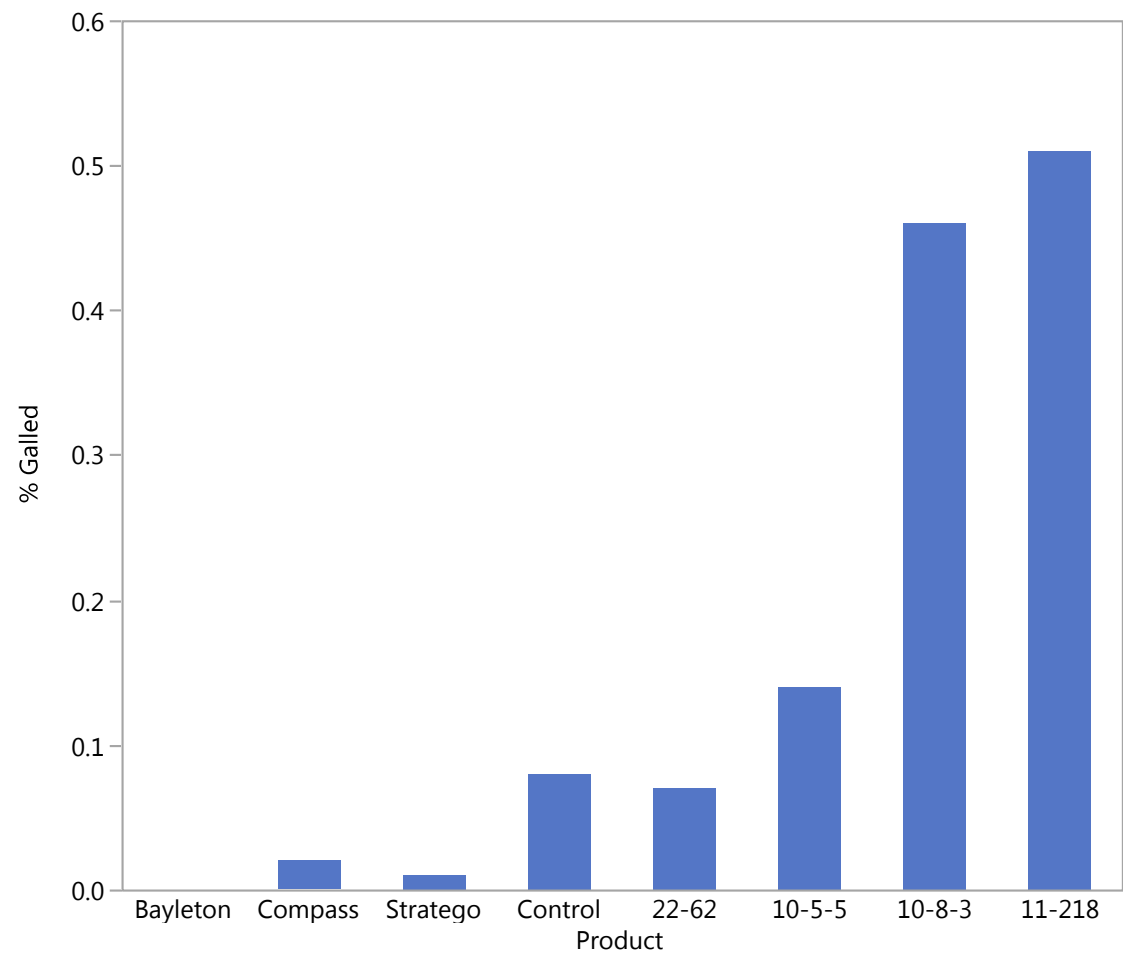
## What has happened to date

- Fungicide treatments applied to seedling at Auburn Laboratories at 2 weeks post germination
- Seedlings sent to Asheville, NC Rust Lab
- Seedlings challenged with rust spores at 8 weeks post germination
- 4 month evaluations made by NC Rust Center

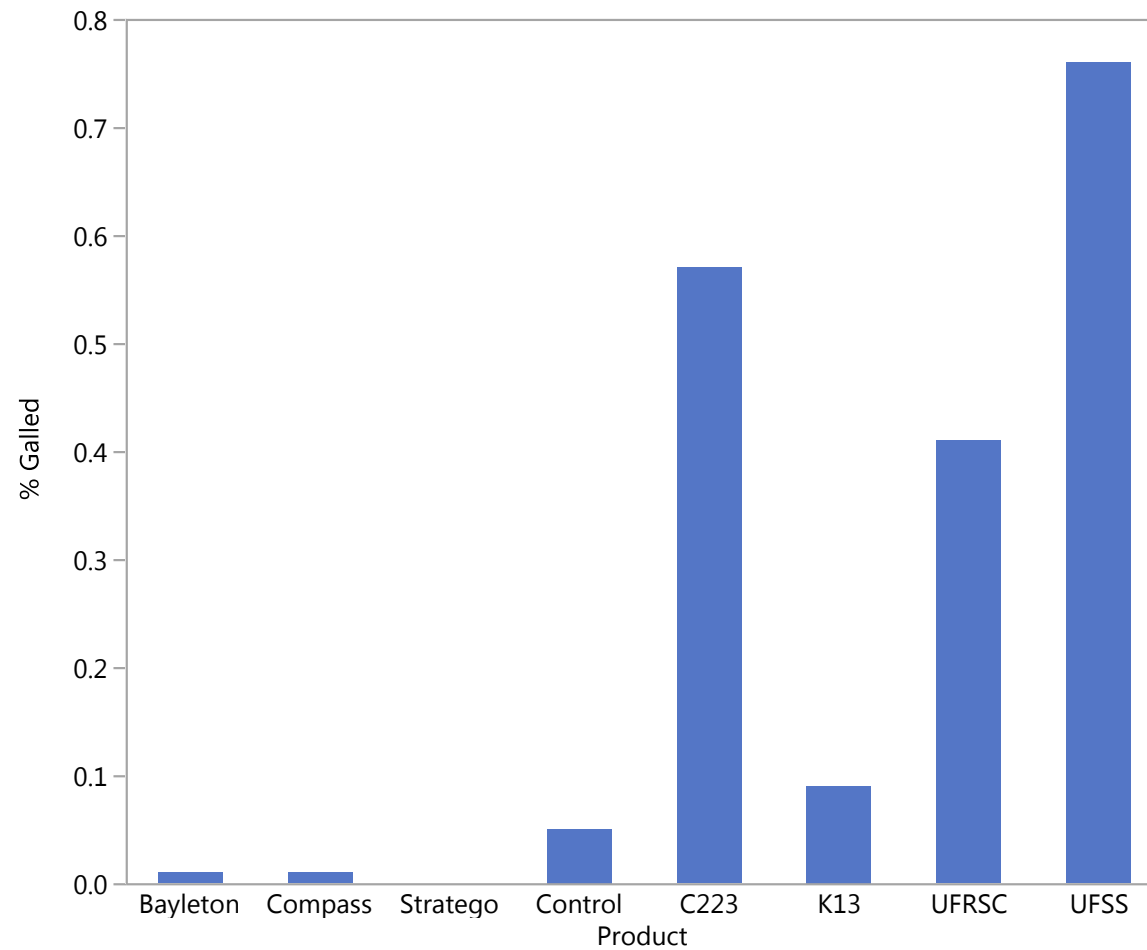




# Loblolly foliar infection



## Slash foliar infection



## Conclusion

- The lower seed application rates of Proline® were less effective than that of the recommended rate.
- The 3 month assessment of seedlings indicates low levels of infection for treated seedlings. The trial needs to be repeated to test reproducibility.



# Fumigation trial update



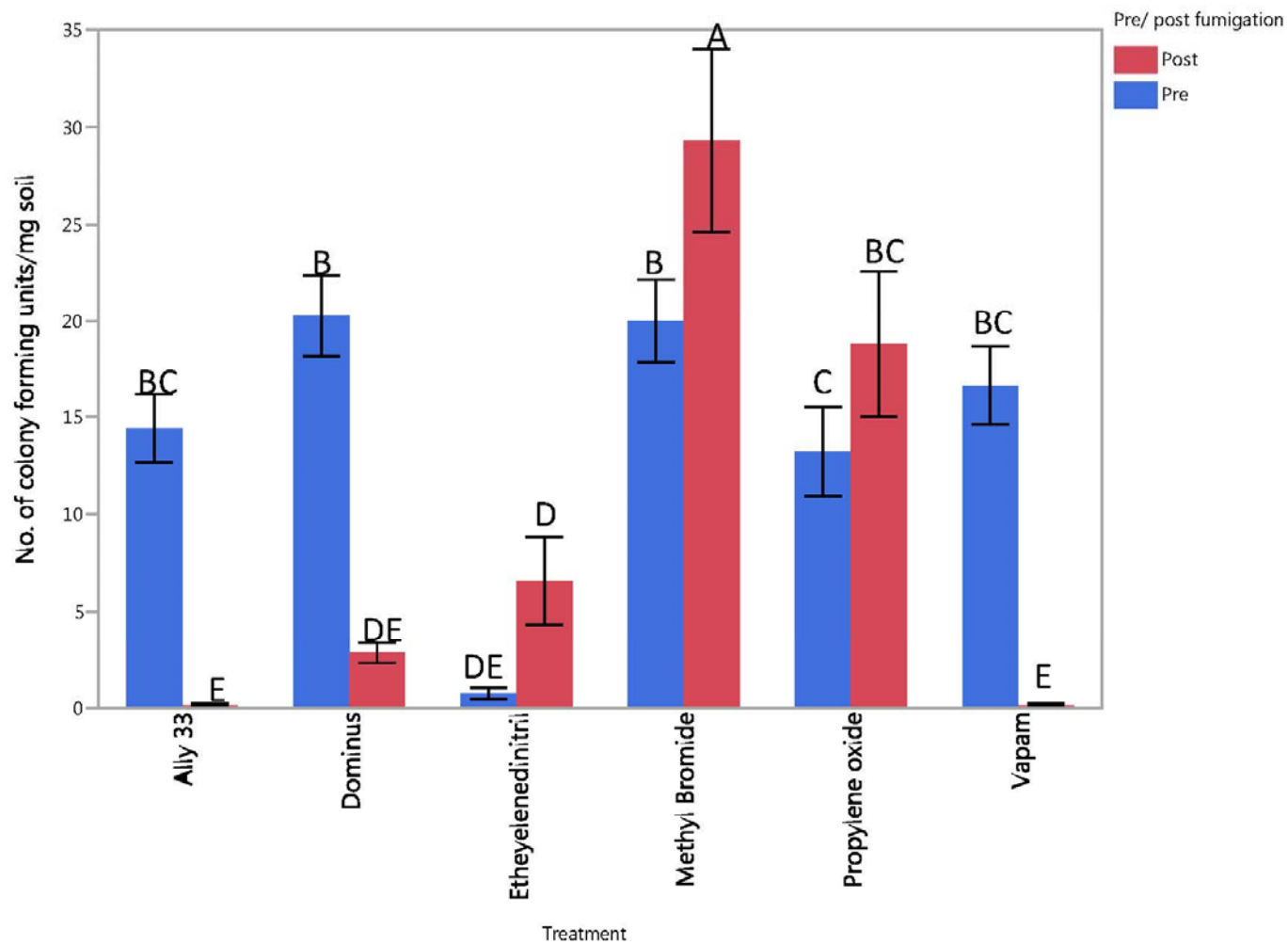
## Fumigation trial

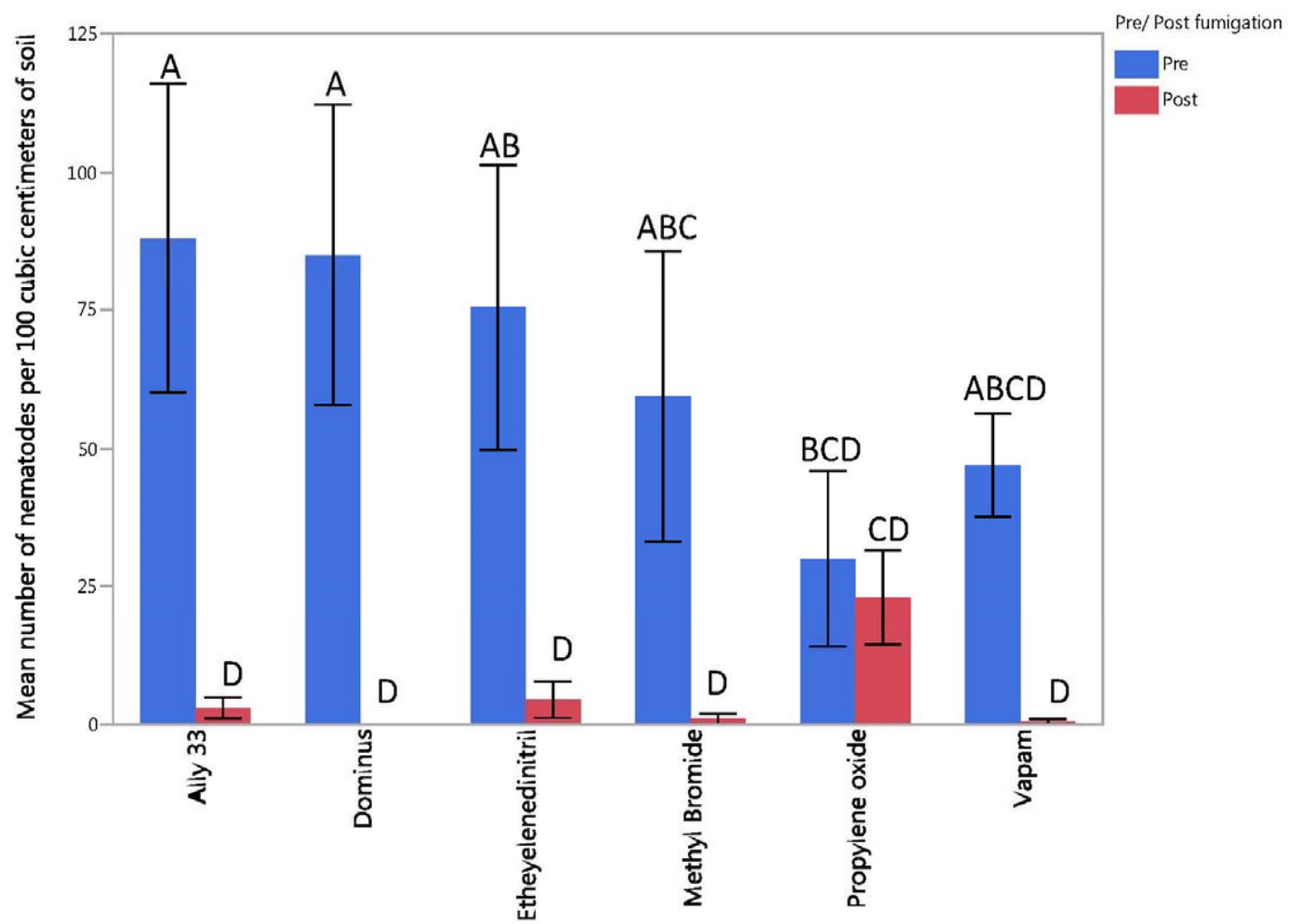
Treatment	Rate
Methyl Bromide (80/20)	400 lbs./ac
Ethylene dinitril (EDN)	500 lbs./ac
Ally 33 (67% Dominus + 33% Pic)	500 lbs./ac
Propylene Oxide	600 lbs./ac
Dominus (AITC)	500 gal./ac
Vapam (SMDC)	75 gal./ac

## Rayonier: Elberta, Alabama November 2016

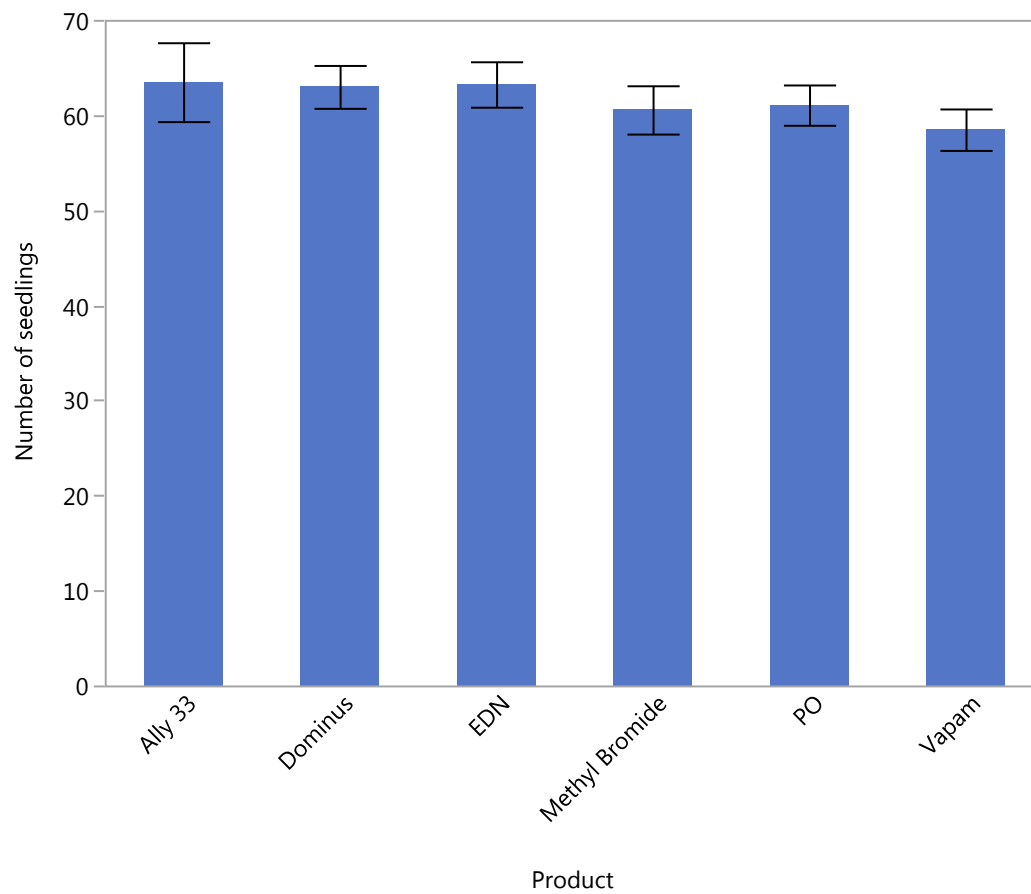




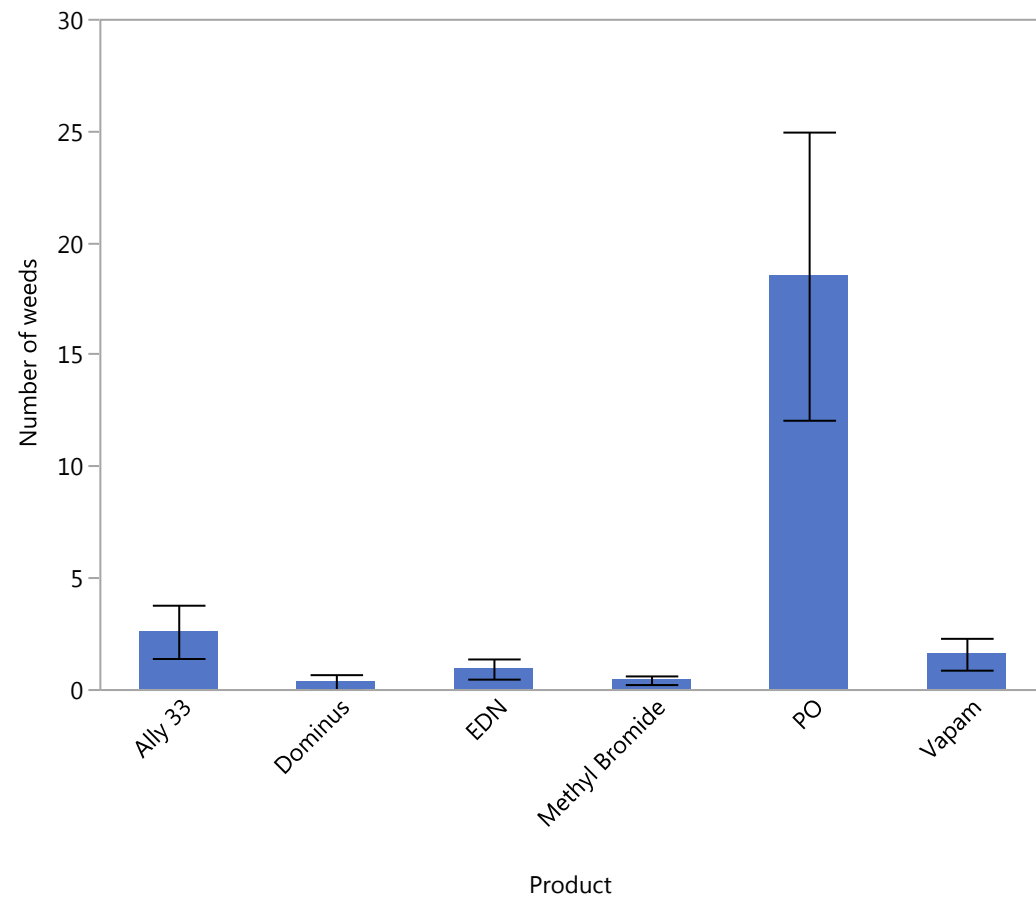




# Loblolly seedling counts



# Loblolly weed counts



## Soil fumigation – season 1

- Continue to monitor for seedling characteristics / end of season.
- Sown again next spring.
- Part of Southern Forest Nursery Association's Biennial Meeting in July 2018.



