

Essential Plus 1-0-1 Trial

Will Harges

SFNMC Contact Meeting

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Introduction

- This project is a seed treatment trial of the biostimulant Essential Plus made by Growth Products, Ltd. (80 Lafayette Avenue White Plains, NY 10603)

Introduction

- Definitions:
 - Biostimulant
 - Biological

Introduction

- Seed treatments are common.
- Biostimulants and biologicals are less common.
- The AUSFNMC has tested many seed treatments, with mixed results.
 - RR99-06, (Nine biological seed treatments)
 - RR04-01, (Germ. of LL by family, sower, trt.)
 - Many others
- Often hard to assess impact of “inert ingredients” – RR09-5

Introduction

- Biostimulants have the capacity to impact growth through:
 - Hormones and hormone like substances
 - Nutrition
 - Plant availability
 - Micronutrients
 - Vitamins
 - Other unknown mechanisms
- Often effects due to “inert” ingredients (RR 11-03).

Objective

- The objective of this trial was to determine if using Essential Plus as a seed treatment increased seed germination, taproot growth, and survival.

Study Design

- Study was implemented in loblolly and slash pine.
- Stratified seed was divided into three treatment groups:
 - Essential Plus
 - Hydra-Hume
 - No treatment
- Prepared seed was sown in sand mixture.

Study Design: Layout



- 5 trays per species
- 3 rows per tray.
- Randomized Block design.

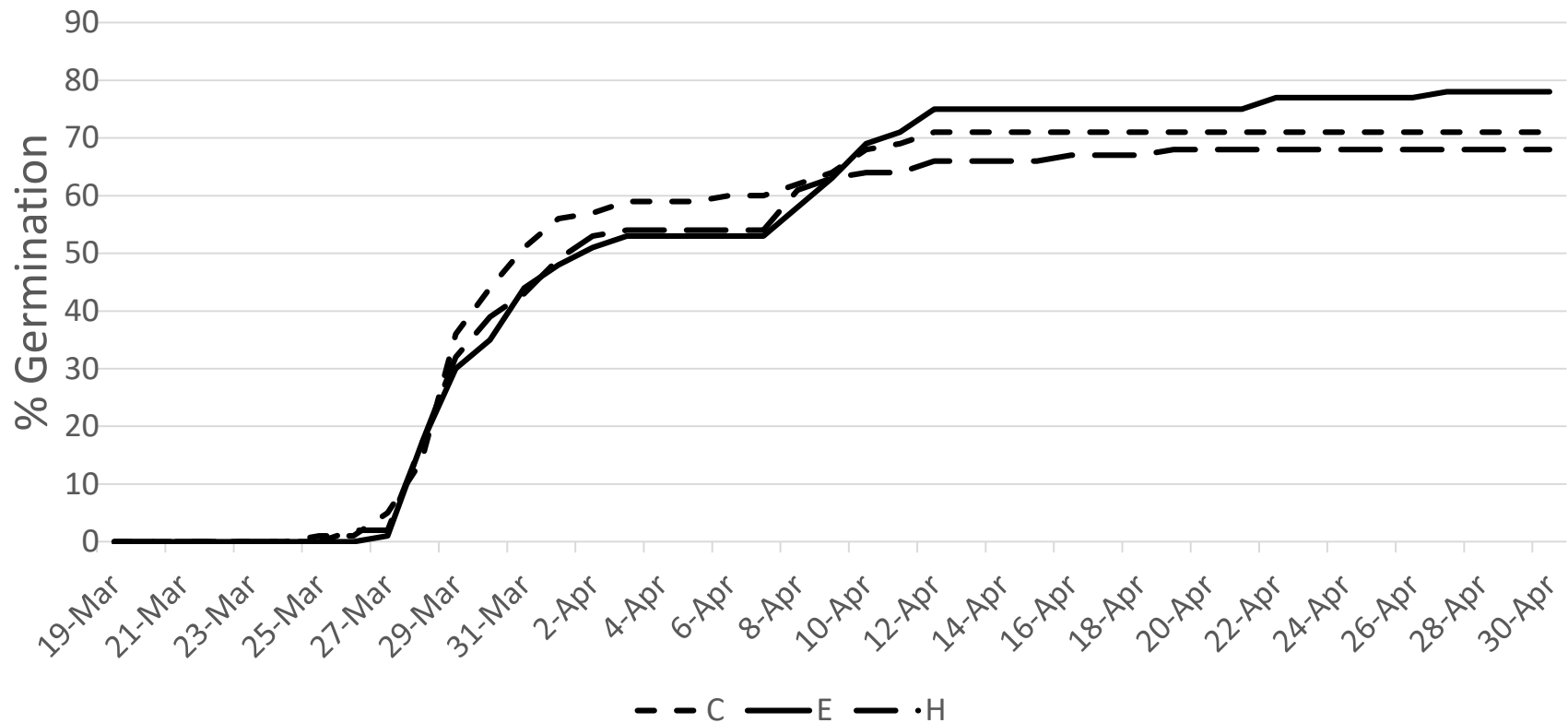
Study Measurement



Study Measurement

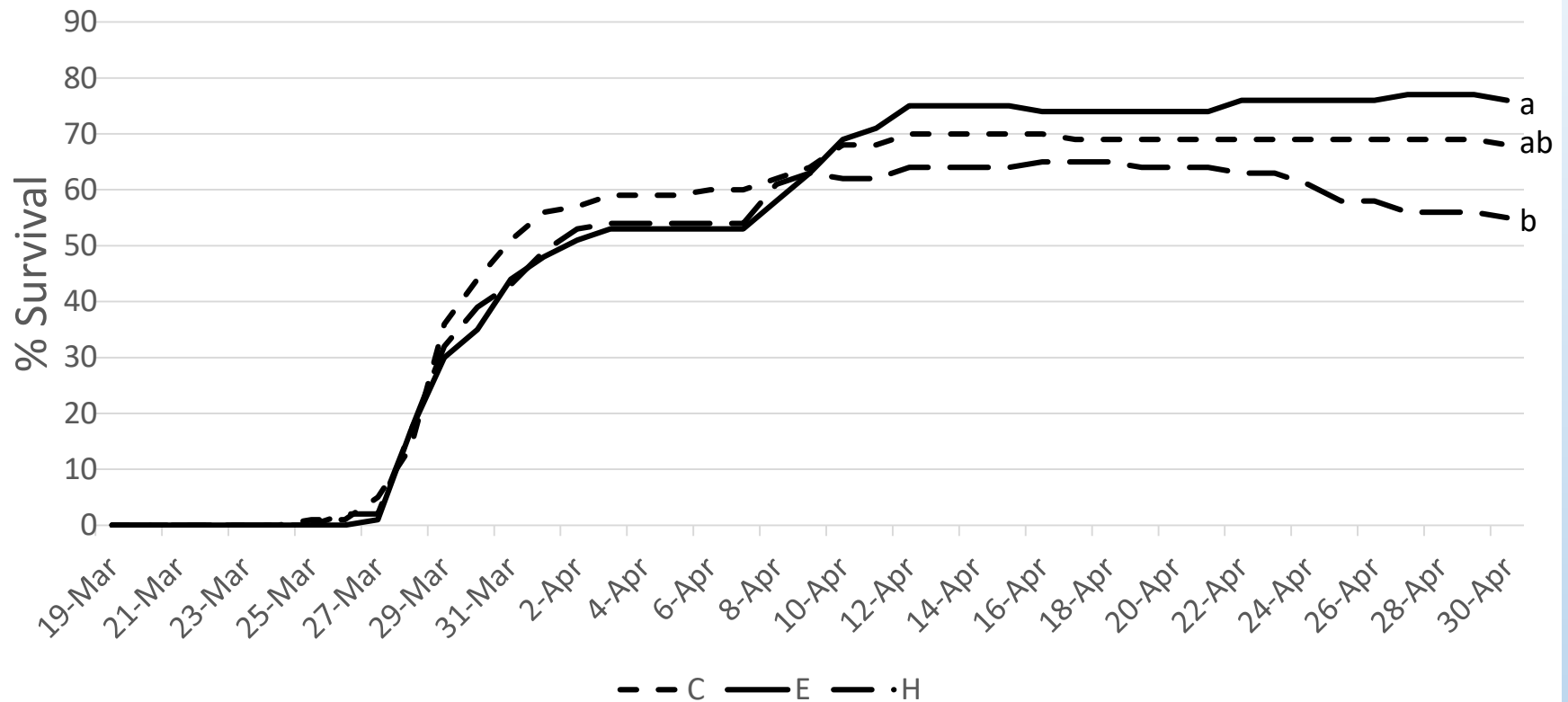


Loblolly Pine Results – Germination



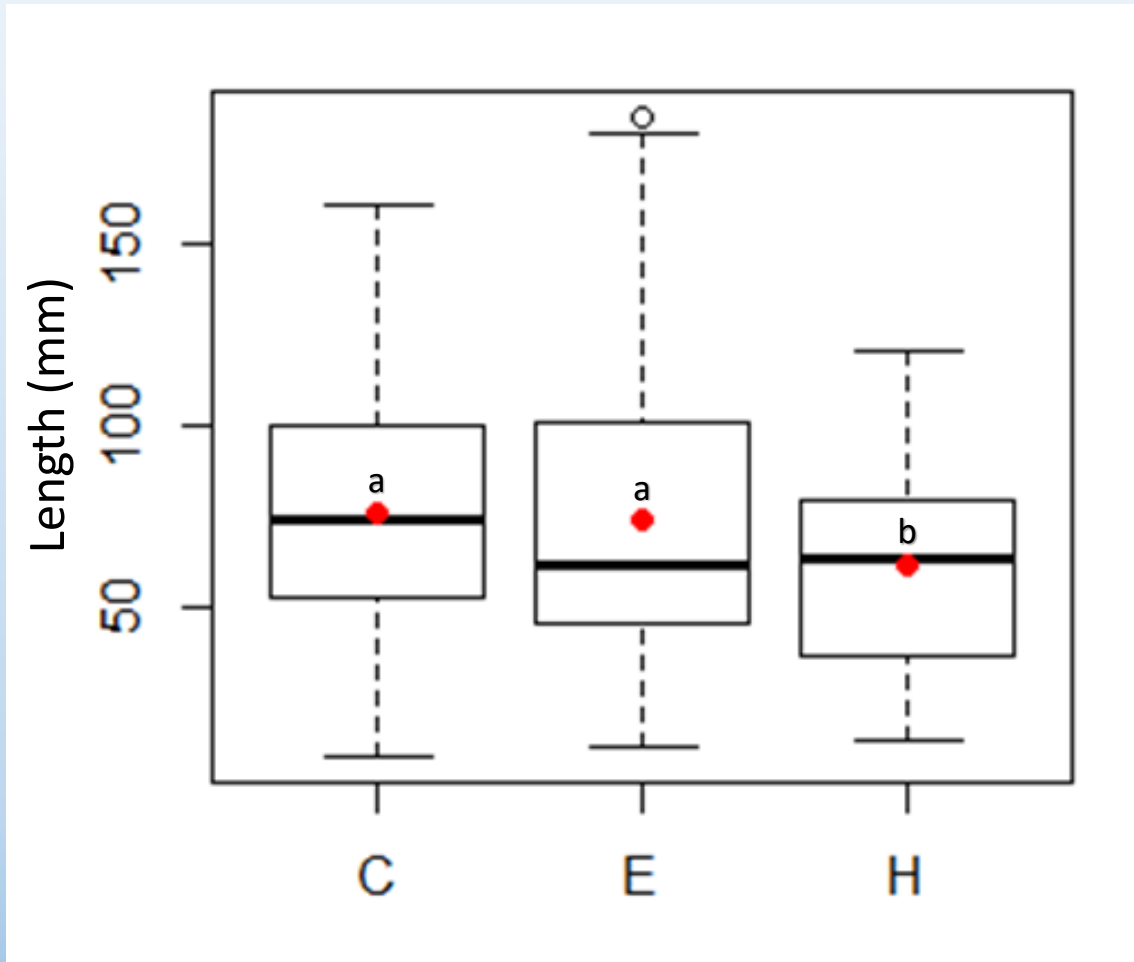
C=no-treatment control, E=Essential, H=Humic acid.

Loblolly Pine Results – Survival



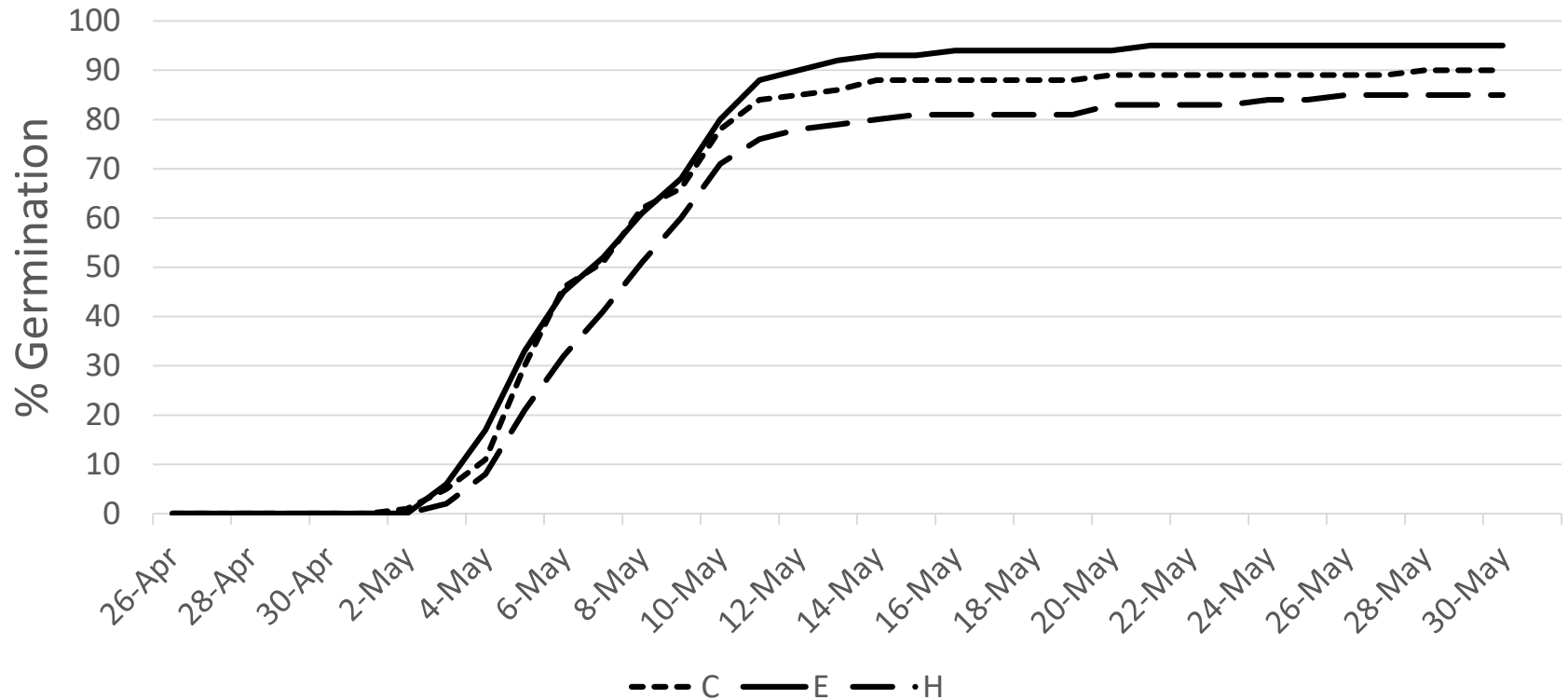
C=no-treatment control, E=Essential, H=Humic acid.

Loblolly Pine Results – Root Length



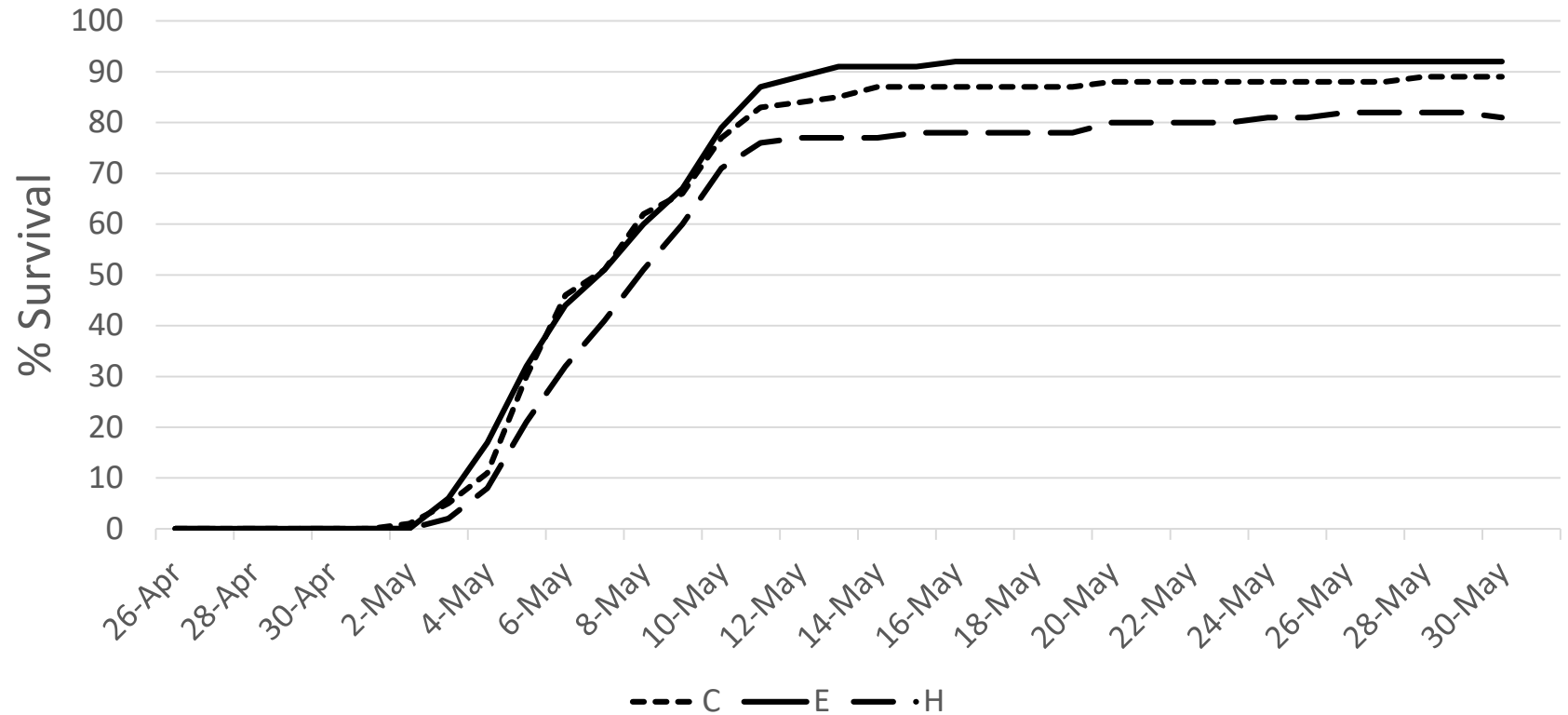
C=no-treatment control, E=Essential, H=Humic acid.

Slash Pine Results – Germination



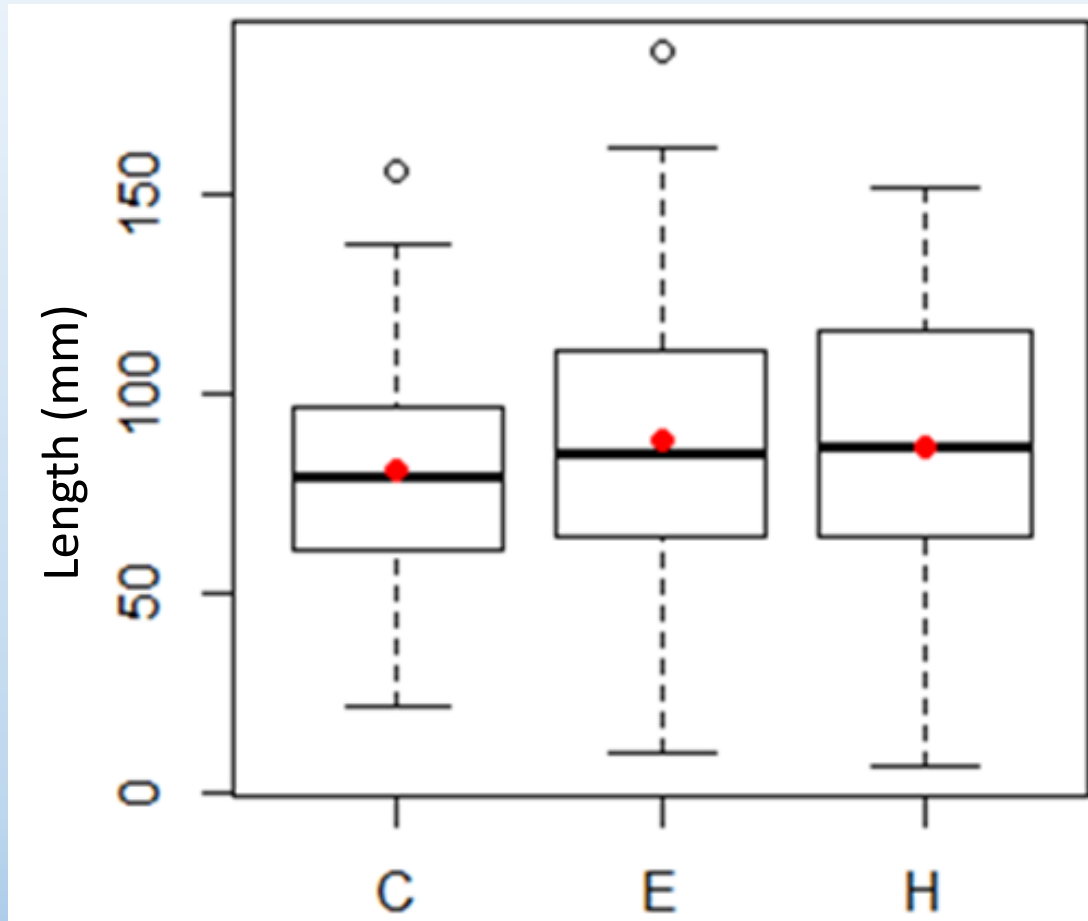
C=no-treatment control, E=Essential, H=Humic acid.

Slash Pine Results – Survival



C=no-treatment control, E=Essential, H=Humic acid.

Slash Pine Results – Root Length



C=no-treatment control, E=Essential, H=Humic acid

Summary

- In a seed treatment trial of Essential Plus
 - No difference between Essential and untreated control.
 - Some differences between Essential and humic acid.
 - Essential was not phytotoxic to the pine tested.

Questions?