Progress Report

Quantifying silvicultural treatment effect on lumber quantity and quality in loblolly pine

CAFS 21.88

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Presenter: Joseph Dahlen - UGA

FMRC Intensively Managed Plantation (IMP) trial

VIRGINIA TECH | FOREST MODELING RESEARCH COOPERATIVE

<u>3 Treatments</u>

A. Control

B. Light thinning

C. Heavy thinning with pruning in butt log

Treatments applied when trees reached 40-46 ft

120 trees felled

Logs & resulting lumber tracked thru sawmill

- Treatment
- Stand
- Tree #
- Log #
- Position within log

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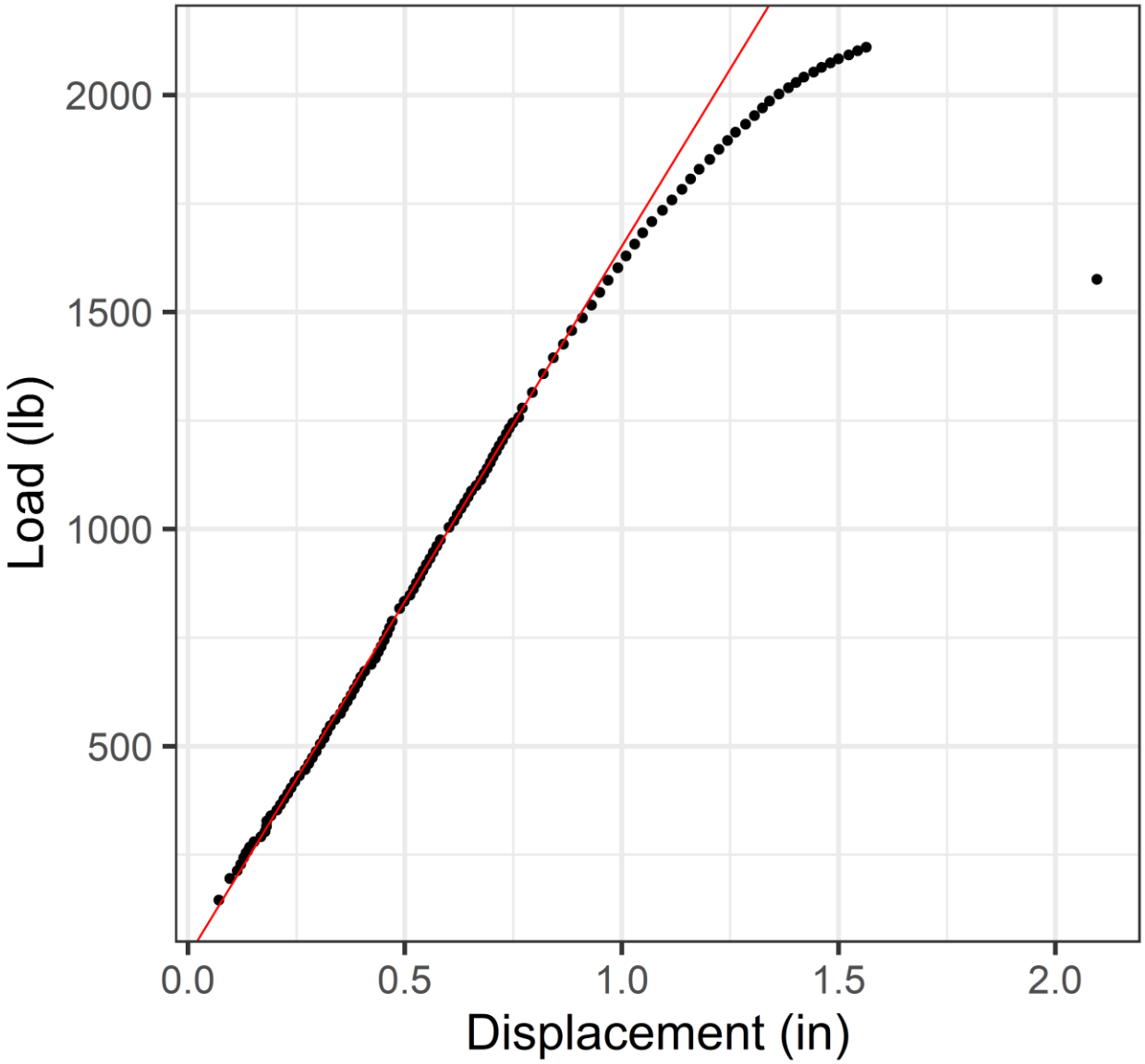
Ran into a few delays with hardware
Lumber imaging system needs calibration and some software tweaks

Encoder on Universal Testing Machine failed – part arrived and awaiting install

Good news on software front

Current Progress

Automated analysis robust for modulus of elasticity



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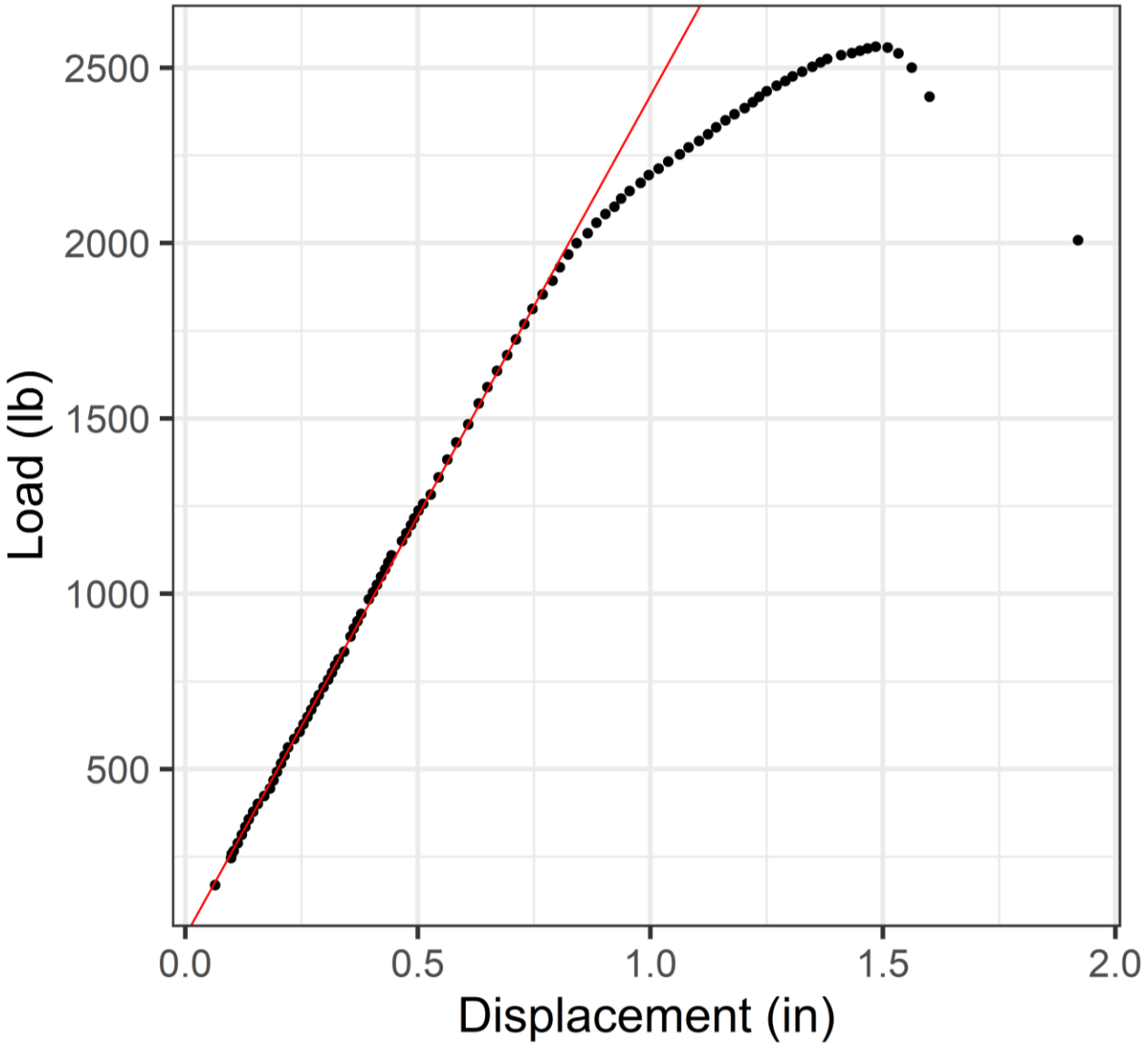

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All lumber pieces accounted for
Some lumber ‘destroyed’ during milling process and logs where this happened have been identified (where obvious e.g. missing pith piece)

Lumber imaging for knots

Future Plans

Destructive testing after imaging

Thank You and Questions?

- NSF Center for Advanced Forestry Systems
- Members of CAFS
- Members of the Wood Quality Consortium, Forest Modeling Research Cooperative, and Plantation Management Research Cooperative
- USFS Forest Products Laboratory
- Daniel Carroll and Ashlyn West from Southern Pine Inspection Bureau
- In loving memory of Harold Burkhart
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