New Project

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

CAFS.21.86

Joe Dahlen (UGA), Cristian Montes (UGA), Bronson Bullock (UGA), Corey Green (VT), Harold Burkhardt (VT), Tom Eberhardt (USFS)

Joe Dahlen

- Very few forest thru mill studies done due to the stars rarely ever aligning just right

- As such very little information is available on product quantity and quality from the forest thru the mill

- Information pertaining to silvicultural treatment effect is even more limited

Regionwide Intensively Managed Planation (IMP) study

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Control

Light thinning

Heavy thinning with pruning

- Objective is to determine the lumber quantity and lumber from 5 sites (105 trees) from the FMRC IMP trial

- Major research question is will the heavy thinning treatment (2/3 of the trees removed) and pruning the first log result in more value than the light thinning treatment?

- Hypothesis: Light thinning will result in more value

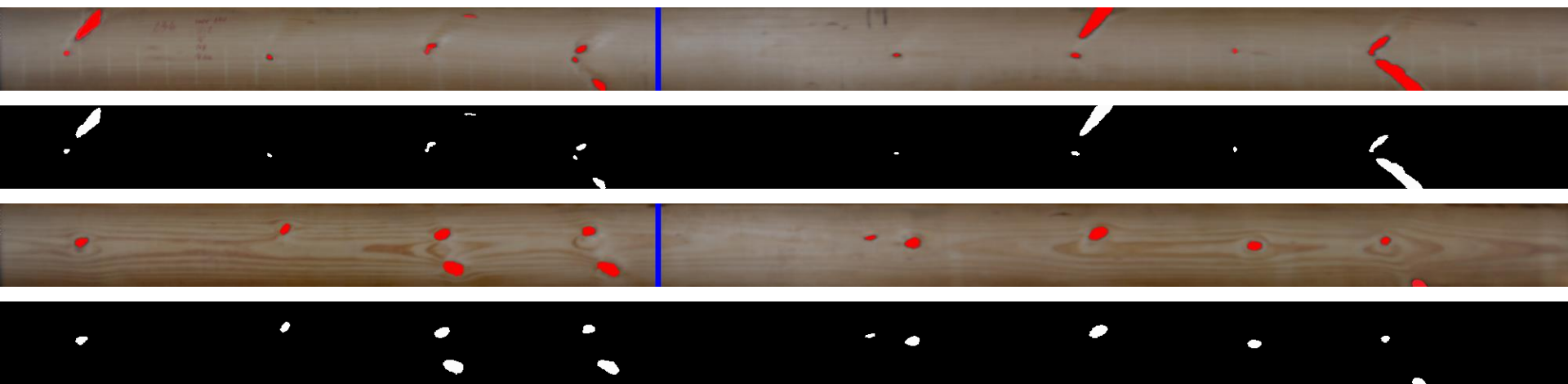- With that said, the butt log is beautiful!

- A prior CAFS project quantified knots on the wide faces of lumber from a sub-set of samples from prior mill study

- Here we will quantify knots on all faces from all pieces

- Particularly valuable given the thinning and pruning treatments

- Lumber quality and quantity information as a result of silviculture from a designed experiment

- Evaluation on the impacts of 2 thinning regimes

- The team is working through the budget needed to accomplish this project while considering other funding sources

- As of today the budget requested from CAFS is TBD

A request for support letters

Forest managers use growth and yield systems to project volume and value across time

Linkage to final products can be difficult due to the lack of a built in virtual sawing simulator

AFRI grant application with David Auty (wood biometrician at NAU) and Toby Hocking (computer scientist at NAU) to develop an open source sawing simulator in R
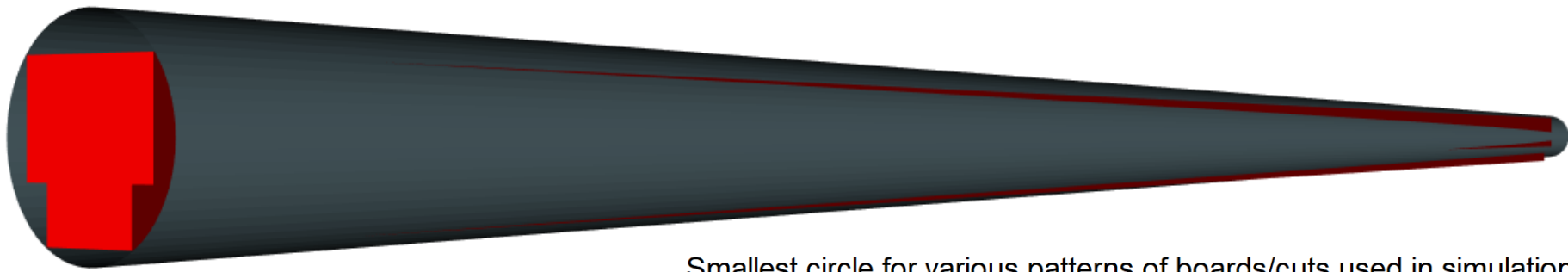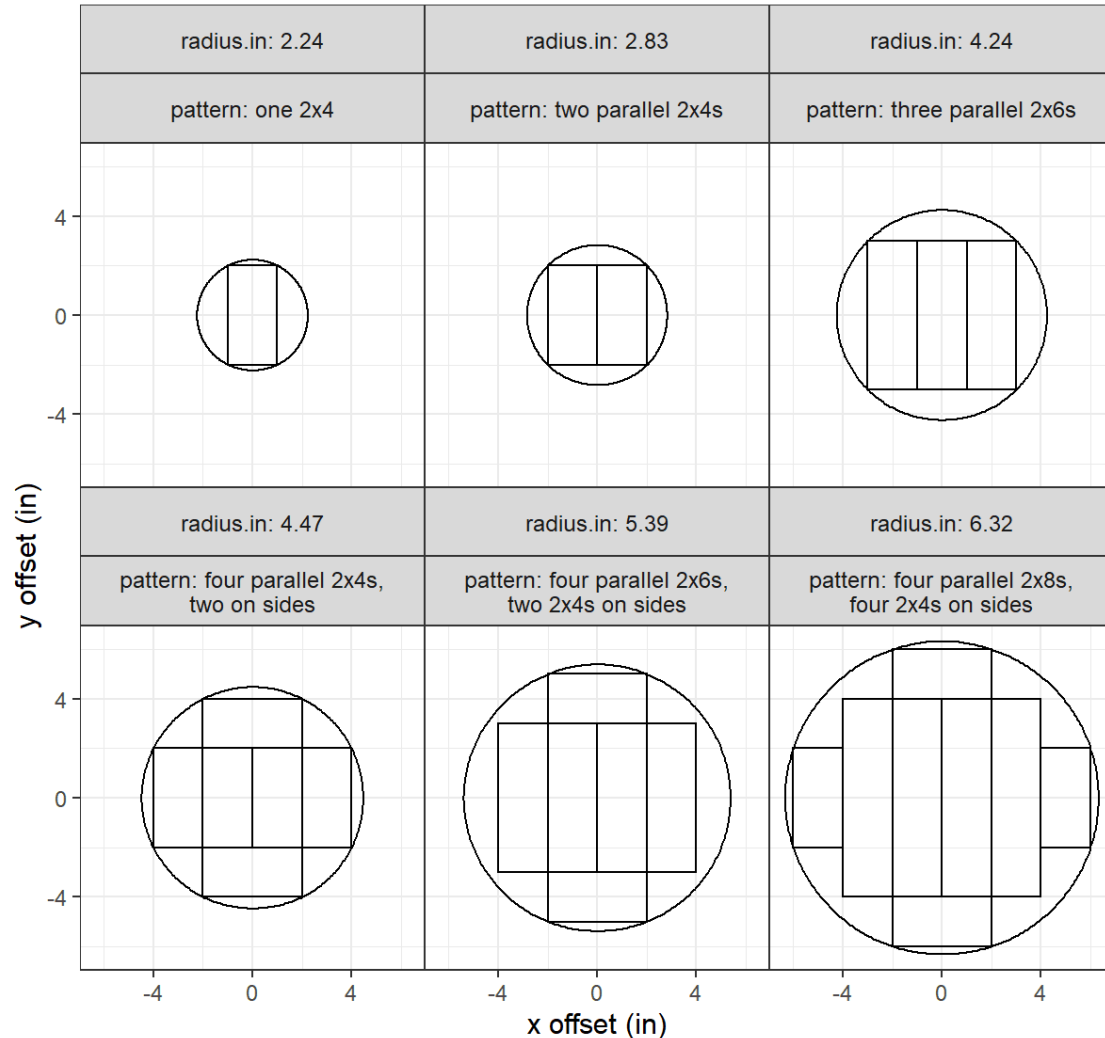
Both companies
and cooperatives

If interested –
jdahlen@uga.edu

Smallest circle for various patterns of boards/cuts used in simulation

radius.in: 2.24	radius.in: 2.83	radius.in: 4.24
pattern: one 2x4	pattern: two parallel 2x4s	pattern: three parallel 2x6s

radius.in: 4.47	radius.in: 5.39	radius.in: 6.32
pattern: four parallel 2x4s, two on sides	pattern: four parallel 2x6s, two 2x4s on sides	pattern: four parallel 2x8s, four 2x4s on sides

y offset (in)

x offset (in)

Questions?