

Study checks ways to minimize sawing losses

FORESTRY INNOVATION INVESTMENT LTD.

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MOUNTAIN PINE BEETLE

Researchers are investigating ways to maximize recovery from mountain pine beetle-attacked logs that tend to exhibit a varying severity of checking.

Checking refers to the radial cracks that develop as dead and dying lodgepole pine logs dry out. The checking is highly variable and is hard to detect and measure throughout the uncut log, making it challenging to plan primary breakdown cuts that will maximize lumber recovery.

Forintek is developing scanning equipment to detect and measure checks at the leading and trailing edges of logs. Under a contract with Forestry Innovation Investment Ltd., Forintek Canada researchers have been investigating mathematical equations

that will help future generations of this equipment predict check depth throughout the log.

In the first phase of the work, several regression equations were developed based on log features that are fairly easily measured by scanning and vision systems. A limiting factor can be the quality of the debarking operation, which might leave bark or scars on the log that obstruct scanning systems.

Dozens of logs were measured and tested during the research, which showed that scanning systems that an "see" along the length of the log, when integrated with certain equations, will predict check depth with an accuracy (or confidence interval) of



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6 to 7 mm. The result is information that the operators can use to greatly improve sawing optimization. Several equations were developed

Improvements in lumber recovery will have to be balanced against the cost of improved scanning and vision equipment, but initial results so far indicate

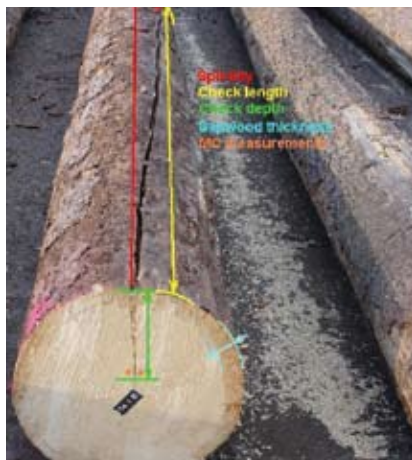


after a lengthy series of revisions and refinements as researchers learned about which variables have the greatest influence over check depth. Among the most

the opportunity exists for minimizing recovery losses. Further research is on-going into how this ability to predict check depth might be integrated with log breakdown programs and systems in a cost-effective way and confirm and quantify the recovery gains that might be possible.

FOR THE FULL REPORT GO TO WWW.BCFII.CA/MPB/ AND DOWNLOAD "MPB 2006-01: A STATISTICAL METHOD OF DETERMINING CHECK DEPTH IN MPB AFFECTED LOGS".

important were log diameter and taper. Two equations have been identified as effective in predicting check depth through the log, appropriate to either dry or moist conditions.



Forestry Innovation Investment Ltd. is a British Columbia government corporation investing in initiatives to help market BC forest products, and promote our sustainable forest practices to the world. FII's Mountain Pine Beetle Program supports government's Mountain Pine Beetle Action Plan and its objective to maximize the economic value of mountain pine beetle wood. FII does this through marketing activities and research into new products and manufacturing processes for mountain pine beetle wood.

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