

Beetle-killed sawmill residuals could supply OSB strands

FORESTRY INNOVATION INVESTMENT

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Trim ends of rough green lumber produced from logs killed by mountain pine beetle could be a good source of strands for oriented strandboard (OSB), researchers say.

A study sponsored by Forestry Innovation Investment says this means such sawmill residuals may offer new revenue streams in addition to pulp chips. At the same time, OSB manufacturers are interested in cheaper sources of wood strands to add to their in-house supplies.

Researchers set out to look at the technical and economic questions relating to this opportunity. They first identified five possible sources of residual material – fibre left over after

the production of lumber – as log end trims, slabs from primary breakdown, edgings, green lumber trim ends and dried lumber trim ends.

From an economic point of view, the continued competitiveness of OSB mills will depend greatly on their ability to control rapidly rising wood and energy costs, the report says. Accessing strand residuals from outside sources may help on both fronts. For sawmills, the prospect of a new revenue stream must be balanced against any capital investments and process changes required.

To answer some of the technical questions, researchers worked with logs that had been dead due to beetle attack



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for three to five years. Samples of the five types of residual were collected and sent for stranding by industrial labs in Vancouver and Germany.

Both labs noted the dryness of the fibre, due to time of year, length of transportation and the inherent dryness of beetle-killed wood. Each modified their knife angles and machine speeds to suit the samples, and the German lab soaked a portion of the samples to reduce the proportion of very small material produced.

The resulting material from all samples was measured and assessed by the University of British Columbia.

- Green trim ends generated the best overall results and are generally quite easy to pull from the traditional mill process.
- Slabs produced relatively good results and might be a good source of OSB strands for stud mills interested in removing them from the high-speed chipping process and diverting them to another use.

- Log ends produced the highest percentage of 1" flakes, but many were larger than this and not suited for OSB production. With debarking and handling issues, this source was moved down the opportunities list.
- Dry trim ends produced more small material and fewer usable strands. With higher prices available from finger-joint markets this source will not be high on the list.
- Edgings produced the highest percentage of unusable small fibre, as well as small strands. The edgings were also difficult to handle and machine – consequently they are at the bottom of the opportunities list.

Researchers caution that all results come from laboratory settings and may not translate directly to a mill operation. There are also cost implications to diverting residuals for strand production. A more complete discussion of these issues can be found in the full report.

FOR THE FULL REPORT GO TO WWW.BCFII.CA/MPB/
AND DOWNLOAD THE REPORT "MPB-07-041:
CONVERSION OF MPB SAWMILL RESIDUALS
TO STRANDS FOR OSB"

Forestry Innovation Investment is a British Columbia government corporation investing in initiatives to help market BC forest products and promotes our sustainable forest practices to the world. FII's Mountain Pine Beetle Program supports the 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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