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## COLLINS COMPANIES DEBUTS PACIFIC ALBUS

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# COLLINS CUTS NEW— HARDWOOD

By  
**Dan Shell**

**One of the nation's largest hardwood sawmills is cutting a "designer" hardwood species in the Pacific Northwest.**

BOARDMAN, Ore.

**D**eveloping and introducing a new lumber product can be challenging; doing it during some of the toughest lumber markets in decades is downright tough. Yet The Collins Companies' new Upper Columbia Mill (UCM) hardwood sawmill and planer mill here are running well, waiting for

markets to return for the 100MMBF annual capacity operation to take its place as one of the highest production hardwood mills in the U.S.

The mill is sawing a traditionally underutilized hardwood species—Pacific Albus™—developed from hybrid poplar stocks and specially selected for aesthetic and sawlog qualities by Greenwood Resources, which is intensively managing a 24,000 acre poplar plantation just south of Boardman in eastern Oregon that feeds the new sawmill.

The project's deepest roots go back 20 or so years, when Boise Cascade and Potlatch began developing eastern Oregon and Washington poplar plantations for paper mill chips, as a hedge against future high chip prices. Yet when chip prices actually went down, both companies were looking at ways to add more value to the timber. Before the plantations were sold to Greenwood in May 2007, Potlatch was already running a small, mostly experimental sawmill on the current mill site

and was looking to build a larger facility when the sale occurred.

Timber owner is the Greenwood Tree Farm Fund (GTFF), a Greenwood Resources investment fund that has agreements for Greenwood Resources to manage the timberlands and Collins Cos. to operate the sawmill, planer mill and chip mill. (Another company, Zeachem of Colorado, has an agreement with GTFF to provide furnish for a cellulosic ethanol demonstration plant nearby that will utilize plantation biomass to produce fuel ethanol and other byproducts.)

The project fit well with The Collins Companies: The organization has a strong hardwood lumber division with an extensive sales and distribution network in place to introduce a new hardwood product. In addition, the sustainability aspect of the project, which includes several "green" features, meshed with Collins' commitments to FCS-certified timberlands and Natural Step principles in its operations.



2RS/Optimil lineal edger has some unique features.

Interestingly, while the sawmill is located roughly in the middle of the plantation, where average log haul distance is just over three miles, the planer mill is located 10 miles away at The Port of Morrow, along the Columbia River. Reason for the separate locations is the planer mill is able to utilize steam from an adjacent Portland General Electric steam plant also located at the port.

A groundbreaking for the sawmill was held in September 2007, with the sawmill starting up in October 2008 and an official opening in January '09. Beck & Associates was responsible for engineering, working closely with Collins' internal project engineers.

"We're running reasonably well, though not at full capacity," due to markets, says Kerry Hart, sawmill manager, describing the current operational setup with one cross-trained crew working two to three weeks at the sawmill, then moving to the planer and working two to three weeks. "This keeps our overall costs lower and gives the employees more consistent employment," he says. "Hopefully, we'll be going to one full shift basis soon."

Running one shift would mean around 40MMBF of production annually, Hart says. At full capacity, the mill will produce 80-100MMBF annually, making it one of the largest hardwood sawmills in North America.

## PRODUCTS

The mill's two main products are  $\frac{3}{4}$  S2S in random width, which competes with Eastern hardwood and Western alder and maple, plus a  $\frac{3}{4}$  S2S random width board that competes with softwoods as a shop-type lumber, all in lengths up to 13 ft. (4 m). The mill also offers timbers up to 6x8 and pallet shook material.

Much of production goes to secondary manufacturers, including surfboard and snowboard producers. According to Collins officials, the lumber takes and holds paint, stain and enamel exceptionally well and is ideal for machining, gluing, boring and turning. All production is FSC-"Pure" certified.

According to Lee Jimerson, Collins Cos. sales manager, orders have taken off at the end of the year through now, as customers who've bought small orders in the past and done their own testing are now calling back and expanding into bigger shipments—plus a stream of new customers as the sales staff seeks out new applications.

Jimerson says one key to the product's acceptance is that Collins has complete



Outfeed of Comact primary breakdown line



Scanning infeed to TMT curve-sawing gang



Collins' Pacific Albus logs are bucked to 8, 10 and 12 ft.

control over the production process from harvesting to sawing and drying, enabling the company to provide a more consistent product.

He adds that Collins' Pacific Albus has already found several niche markets, including snow-, surf- and kiteboards, lightweight pallets, furniture frame stock, picture frames, ceiling grids, paneling and solid and finger-jointed molding and millwork and window shutters.

Jimerson also notes the product has found a number of uses in LEED certified green buildings, thanks to its FSC-certified "Pure" status. "A week doesn't go by where we don't find a new application where Pacific Albus has a com-

petitive advantage due to its light color and light weight compared to other Western woods, either hardwood or softwood," he says.

## OPERATIONS

One of the most striking aspects of the project is the sawmill's procurement scheme: The timber grows to more than 100 ft. in less than 15 years, with butts up to 2 ft. The mill is located where the average log haul distance is barely more than three miles. (In fact, when *TP* visited, one contractor was working within sight of the mill.) An extensive private road system allows large and long loads,

Log sizes are maximized with processor head logging, with preferred lengths up to 55-65 ft., and all logs topped at 7 in. Incoming trucks are weighed across a set of Scales Unlimited electronic scales. Wheeled log loaders unload trucks, stack logs and feed the sawmill's log merchandising line, which features a Nicholson A5 debarker. The two-saw (one fixed) line includes Nelson Bros. controls and Pacific Industrial hardware. A chip mill on site features a Fuji debarker, Acrowood chipper and BM&M screening system.

Logs are bucked to 8, 10 and 12 ft. (4 m) lengths and fed to a new Comact SLI primary breakdown machine with Co-

compact laser and camera scanning and optimization. Logs are scanned initially, pass through a log turner and pointed horns down, scanned again to confirm the turn, then are scanned a third time to provide positioning data for the SLI optimizer.

Logs pass through a set of two-sided saw face chip heads and close-coupled twin band. Multiple sideboards are routed to a Comact Cetec horizontal resaw that's manually set and fed.

Single sideboards flow to a new 2RS lineal board edger manufactured by Op-timil and featuring JoeScan



Mill Supervisor Tim Patton



Sawmill Manager Kerry Hart



MoCo stacker makes 8x6 ft. packs.

One of five kilns from SII Dry Kilns

scanning hardware and Nelson Bros optimization. The three-saw edger handles boards up to 14 in. that are fed on a belt conveyor at speeds up to 1,200 LFPM. The edger features a proprietary in-house developed queing machine that keeps board gaps to a minimum.

The edger operates with collared saws capable of skewing and slewing, and no guides or lube. The design uses linear motors for set positioning, and can perform true transverse sawing.

Center cants from the SLI are fed to a Timber Machines Technology cure-sawing gang with JoeScan scanning hardware and Nelson Bros. optimization. The gang, with single-arbor, dual bank saw setup with variable center pocket, removes additional grade boards from the cant produced at the SLI.

The lower grade center material is either sold as 3x4 up to 6x6 timbers or routed to two pallet shook gangs to saw pallet stock.

Boards flow to a Turner Engineering (TECO) trimmer with JoeScan scanning and Nelson Bros. optimization. The unit feeds 80-120 lugs/min. and includes PLC tong feeders.

Leaving the trimmer, boards flow to a TECO 16-slant bin pusher lug sorter, which feeds to a Moco stacker. The stacker builds 8x6 ft. packs, which are a more efficient size for the 10 mile haul to the planer mill, and a Lumber Track bar-coding inventory control system gives each a tag.

Another "green" aspect of the sawmill is there are minimal hydraulics: Most positioning is done with electronic over electric actuators. Hart says there's no need for hydraulic fluid and related environmental and safety concerns, plus the electric-based systems save on energy use.

## PLANER MILL

Lumber loads from the sawmill are moved directly to the kilns. Heated with steam from a large steam power plant a quarter mile away, the five kilns are supplied by SII Dry Kilns and are center fan wall design side-loading units with 12.5 million BTUs of heat per kiln.

Total capacity is 1MMBF on ¼ lumber, with air velocity over 1,000 FPM. The kilns also feature hydraulic door carriers, a powered vent system and Carter heat exchanger supplied by SII.

"The kilns are really efficient," says Tim Patton, mill supervisor. We can run on only 7,000 pounds of steam an hour once we get up to temp."

Kiln packs are moved via Doosan forklift to the planer mill, which was

built primarily by TECO, including the tilt hoist, trimmer, sorter and related handling equipment.

One twist to the planer mill is it's not a "planing" mill at all: Lumber is instead sanded through a Kimwood two-head sander, one head running 36 grit, the other a 60 grit finishing belt. Feeding into the sander, boards are staged in 4 ft. wide "packets" and fed through simultaneously.

According to Patton, the sander method was chosen after testing showed

sanding provided a better surfacing job on the new hardwood lumber product.

The planer mill runs with three manual graders who mark based on Western Hardwood Assn. grading rules—up to 14 different grades in one ¼ run, for example.

Boards flow under a Lucidyne grade mark reader to a TECO trimmer (PLC tong loaders). Prior to the trimmer, a Wagner in-line moisture meter identifies wet boards. Most production flows to a TECO 9-tray sorter backed by a new Moco stacker and Signode strapping machine. **TP**

