Portable Saws Open High Value Markets

By DORIAN SMITH

he loss of many of the Northwest's industrial sawmills left forest farmers in a lurch. Before computerized technology and



updated business models, most rural towns hosted one or two small or mid-size sawmills. Those mills contributed a modest percentage of the total production of dimensional lumber but also bought or cut logs harvested by small forest farmers eager for a supplementary income. Now the nearest sawmill can be 100 miles or more away. The surviving stud mills are larger and equipped with banks of computers and software that produce more lumber per log with very little residue. The mills that couldn't afford the costs of technological upgrades succumbed to the transition.

Ironically, the development of large mill technology became the opportunity for small mill innovation. Entrepreneurial manufacturers have come to the aid of small forest owners and introduced modern portable sawmills that can be run by one or two workers and can cost less than \$8,000.

As early as the 1920s some manufacturers sold one-person mills. Most lumber towns featured homemade mills that were powered by old car engines attached to saws. With modern advancements, new portable sawmills come with a wide range of optional equipment and can efficiently cut and slice logs 32 feet long with a larger diameter than the maximum logs allowed by many big mills.

The largest dealer is now WoodMizer, which has sold 80,000 portable sawmills in 120 countries over 36 years. Timber King is another major contributor of other models frequently seen in the Northwest. Back issues of "Sawmill & Woodlot Management," a magazine that supports the portable sawmill genre, offer numerous articles, colorful advertisements and online links.

Most forest farmers probably won't be inclined to buy their own portable sawmills. Instead they will prefer to work out arrangements with those who own them. To encourage networks, the two largest manufacturers offer lists of portable sawmill businesses that provide cutting services. WoodMizer's database is searchable by state. (woodmizer.com/us/Services/Find-a-Local-Sawyer) Timber King will reply with sawmill contact information if they are sent a specific zip code to info@timberking.com.

As always, small forest farmers are reminded to add expertise to their decision-making by working with an Extension, state or private consulting forester. Besides sawmill location, there are numerous considerations such as species, markets, forest health and long-term forest management that should be factored. Experienced sawmill operators also may suggest custom cutting options.

The term "sawmill" may confuse people with visions of factory-sized operations. Until the sector establishes a new industry term, a "sawmill" can mean a place of work for hundreds of employees or an apparatus that can fit in the back of a Prius or pickup truck. Thousands of portable sawmills now buzz in rural backyards and outbuildings in Washington, Oregon, Idaho and Montana. One dealer estimated at least one thousand WoodMizer saws were sold in Montana alone. As a result, any forest farm may be only a few miles down the county road from a sawmill. Many owners have been coaxed into regularly cutting trees for two, three or more neighbors who compensate



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Many portable sawmill owners have found niche markets for processed slabs or final products that extend the productivity of their and others' forestland.

the sawyer with free wood.

Information for this research came from an informal survey. The experiences are wide-ranging: some owners have only operated a few years, while others have nearly three decades of experience. Many portable sawmill purchasers are retirees, supplementing fixed incomes. But several forest farms are providing livelihoods for entire families with their portable saws.

Look for what's not available in hardware stores

Sean Sheehan, WoodMizer's representative for Montana, believes portable sawmill owners can make thousands of dollars just beginning with personal use. The next step is to search for niche markets. For instance, Lowe's sells a 2x6 cheaper than a forest farmer can cut one. On the other hand, professional carpenters or owners of old homes occasionally need replacement doors or boards made to different dimensions.

There are many local wood species—particularly hardwoods—that are more valuable than Douglas-fir. For instance, although not all dead trees are useful, beetle-killed pine with blue stain is frequently popular for artisan projects and can command

premium prices. Also popular is rustic material, used to make furniture and other interior items, which retains the rugged and natural beauty of wood. Sheehan said he occasionally searches for new developments because contractors frequently look for decorative wood items that can help otherwise plain-looking homes stand out.

Wood tourism

"I call it wood tourism," says Ken Darby who lives in Fossil, the county seat of Wheeler, Oregon's least-populated county. Though isolated, the small town has become a destination for devotees of western juniper.

Darby's main business is harvesting and processing juniper, a wood so difficult to cut it's shunned by most mills. But Darby taught himself how to cut juniper. He runs his saw at home on 3-phase electrical power, not gasoline, like other portable models. He prefers juniper for its beautiful grain and abundance in north-central Oregon. There are 10 million acres of the species in Oregon, five times more juniper forest than when settlers first arrived, he says.

Much of his juniper product is sold in Portland, western Oregon and a budding Puget Sound market. It's used for landscaping and retaining walls. But he also sells to amateur craftsmen and artisans who visit during vacations.

Darby's wood tourism generates a steady income. Every week a carload of juniper hobbyists purchase \$600 worth of slabs. He juices up his selection with a monthly truckload of blue-stained pine and wood damaged by insects and lightning. Balancing the retail business with sawmill time can be a challenge when visitors request lectures or tours. But lingering juniper customers buy meals and sometimes spend the night, further boosting Fossil's economy.

The treasure of dead trees

Lyal Purinton searches for dead trees; he wants trees that others brand as nonmerchantable. They are too small, stained by disease or attacked by beetles or wormwood for other markets. He eagerly collects trees broken by ice storms and spalted alder, a hardwood stricken with white-rot fungi.

Purinton's customers willingly pay a premium price for these woods. The blemishes and discolored wood grains are sought by owners of trophy homes and artisans who produce furniture, tabletops and shelving that are

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intended to be seen. One avid customer even requested his ashes be interred in an urn made of madrone, his favorite wood.

Purinton originally hauled his portable sawmill to customers' sites. Now, his business is so busy he requires wood be delivered to his home in Buxton, on the edge of the Tillamook State Forest, west of Portland. As a retired electrical engineering manager, he is still available for consultant work. But his priority is running through a tank of gas working his portable saw. The sawmilling is so important to him he pays other craftsmen to make home repairs that he could complete himself. He never cuts studs. Instead he works with a cut list ordered by clients and occasionally he'll suggest custom cuts.

When he's not working on a project, he mills his own wood which sells out after a few days on Craigslist.
"Not much goes to waste," he claims.

"I can sell every stick." He prefers to sell it as housing material; the return on investment for bundled firewood is comparatively low.

Family income from slabs and burls

For the past 10 years, selling slabs and burls for turning bowls has been the main source of income for the family that runs North Woods Figured Wood in Gaston, Oregon. (www.nwfiguredwoods.com/) Previously, the household earnings came from a residential construction business. Then came the 2007-2009 housing and financial recession. To save the family farm, they clearcut the entire forest stand, leaving only piles of chips. A family friend—an avid wood bowl hobbyist—suggested they search the rubble for usable hardwood. And they never looked back.

"We are taking wood waste and generating income," says Susan Currington. They sell slabs of raw wood that are used by manufacturers to make decorative pens, knife handles, sunglasses and mainly bowls. Over the years they've added highervalue processes like "stabilizing" that replaces wood moisture with a polymer.

Their portable sawmill was used for their biggest project: 6,000 square feet of tongue-and-groove chestnut flooring. When they aren't using the sawmill for their own projects, they mill wood for locals at \$75 per hour. She chuckles remembering her father's wood saw that was cobbled together with spare parts.

Creating and experimenting with wood products is labor intensive and it's necessary to pursue a variety of marketing opportunities, such as an online store, trade shows, open houses and a wholesale section. The efforts have paid off and been recognized. Annual sales have been stable for the past decade and the company was awarded a Value Added Producer Grant. The program offers a competitive USDA grant that provides funding for family farms to reach goals to create new products, expand marketing opportunities and increase income. One qualifying activity is proposing mid-tier value chains. For instance, they produce and sell an 8inch by 8-inch by 3-inch thick burl for \$60 to another business which applies finishing work and sells it for up to

North Woods also benefits from "wood tourists" from as far away as Tennessee and Philadelphia who return to the semi-isolated Gaston, west of Portland. Currington believes her family's success for creating and producing unique wood products





came from just learning how to adapt through country living.



Brian Trembley owns and operates a WoodMizer LT-70. He produces unique items and custom cuts that are not available in stores under the name Sticks Milling.

The hired gun

Even though Brian Trembley works part time with an LT-70 (one of WoodMizer's largest production models), he estimates his income is about the same as when he worked as a professional engineer; except now he works outdoors (near Woodland, Washington) among trees and solving problems that enhance the beauty and utility of wood.

He calls himself a hired gun for people who come to him with a project and a log. As their consultant, he wants to enhance the artistic creativity of their home or bed-and-breakfast. "They are hiring me to cut, but also for my life experience."

Brian recalled that during an open house at his home, none of the 70-80 potential clients commented on the breathtaking views of the Columbia River. Instead they asked about his displays of unique wood and custom cuts, which are not available in stores. They admired his maple and cherry wood, non-standard dimensional lumber, stair treads and boards with live edges. His wood can even be curved or peppered with a duck hunter's shotgun pellets. He discourages customers from using Douglas-fir, the Northwest's reigning lumber species. Instead, cuts of maple and cherry have a much higher value.

Nearly all his time is spent at his customers' sites. He mixes his technical engineering expertise in metallurgy, architectural design and structural strength with his more recent forestry knowledge. He can point out the best configuration for buildings and invading bugs that attract birds. "Knowledge becomes valuable," he says. (www.sticksmilling.com)

Growing beyond the small forest farm

Kevin Kaster bought his first portable saw about 27 years ago, after leaving his welding job with Freightliner. He saw that neighbors with forest farms in Oregon's Clackamas County needed a way to harvest and cut trees.

Due to increased business ten years ago, he replaced the original saw with a larger stationary electric-powered saw. More equipment followed, including three kilns, a timber sizer (planer), two Bobcats and a 15,000-pound forklift. Staffing extended beyond the family. The company's

office was moved from a room above the garage to its own building.

Kasters Kustom Cutting, Inc. (www.kasterscutting.com/index.html) is a textbook entrepreneurial success story of launching and expanding a business by discovering underserved niche markets. "The demand came to us," says Daniel, Kevin's son. Today the business operates full time weekdays throughout the year. About 60 percent of Kaster's business is now with wood brokers and construction contractors and 40 percent for the original clientele, small forest farms.

The company's Mulino, Oregon, site, about 45 minutes from Portland, is now visited daily by trucks filled with logs. Some are sent by forest farms for custom cutting. A greater volume is purchased by Kasters to be cut and inventoried for ongoing and future projects. Their biggest-selling wood products include decking, siding, cedar, Douglas-fir 1x4s and 1x6s, and slabs for furniture makers. They are known for recycled beams and prefinished wood products. They cater to the high demand for slabs up to 60inches in width. They also provide custom sawing services. Kaster's wood also can be certified under the Forest Stewardship Council (FSC) which tracks the manufacturing process according to eco-friendly standards.

One of the company's biggest projects last year was the new Multnomah County Courthouse. Kasters helped with a key design element: imprinting

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a wood grain pattern in concrete columns that line the three-story lobby. They also perform work for local Starbuck's, noted for its woodthemed architecture, and Portland's downtown Hilton.

Kaster Kustom Cutting has outgrown its origins as a small forest farm that mostly cut its own wood. The company is now a mid-size business, sawing about a quarter million board feet per year. Nearly all its wood is delivered by customers of its custom-cut service or purchased from outside sources for future projects.

Forest management by Mother Nature

The forest and wood products facilities owned by Zena Forest Products (www.zenaforest.com/) are located about a half-hour west of Salem and managed by the strict principles of Mother Nature. The business only uses indigenous hardwoods and keeps the business small so decision-making and craftsmanship stays nimble. Even though Zena's 1,300-acres is Willamette Valley's largest block of forest farm, it uses a slower, short band saw for precision cuts.

With six employees, Zena is not a side business and operates full time year-round, says Ben Deumling, owner/manager. Its products include countertops, tables, benches and large supplies of pre-finished hardwood for hobbyists and contractors with special wood product needs. Zena's best-



Zena Forest Products is best-known for its hardwood flooring and other products made from native Oregon species. Their mill in the Willamette Valley operates full time all year.

known product is tongue-and-groove hardwood flooring. The flooring is made from Oregon white oak, a native species that grows from California to British Columbia, but Zena only accepts wood grown and harvested within 60 miles. Most flooring sales are in the Willamette Valley with growing markets in Seattle and on the east coast.

Deumling acknowledges that the industrial-sized Northwest wood industry generates more profits through economies of scale. But industrial sawmills are more vulnerable to market volatility when they focus on a single species and few products. Instead he believes Zena benefits from nimble decision-making in maintaining a healthy species diversity. (His mother, Sarah, oversees Zena's forest management: restoration, logging, planting and species selection.) For instance, he was discouraged by the 10 percent decline in his Douglas-fir trees due to root rot and summer droughts. Last year they harvested 260,000 board feet; the majority was Douglas-fir and other softwoods which were sold to the nearby Hampton Lumber mill. About 20,000 board feet were hardwoods for Zena's manufacturing.

When summer droughts weakened their own forests, they responded by seeking and planting species—ponderosa pine, ash and madrone—which are thriving in the changing climate. They've also been experimenting with species that are indigenous to forests farther south—like coast redwood and sequoia—and results indicate they can thrive in the Willamette Valley. With diverse species, "We are hedging our bets more completely," he says. He believes focusing on indigenous species and limiting the size of his business is a proven strategy for forest farms. "I'm trying to innovate for the future." ■

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