

# Lumber Sales & Products Forges Ahead

## Wisconsin Company Expands into Limited Pallet Recycling Operations

By Tim Cox, Contributing Author



**A True Family Business:** *Lumber Sales & Products employs about 17 people today. Company president, Jim Francois (first row right) has worked in the pallet business since his boyhood. He is joined in the business by his sons, Jim Jr. (first row left), 28, and Jason, 26 (first row center).*

JACKSON, Wisconsin – Like many other businesses, Lumber Sales & Products Inc. faced some challenging times when the economy took a precipitous downturn a few years ago.

Like businesses that succeed, the company adapted to changing market conditions and forged ahead. Nowadays, its biggest challenge is handling the growth – the company needs to expand.

Along the way, president Jim Francois has researched and developed a new technology to help other companies prevent mold from occurring on pallets, a technology he will market to the pallet industry through a new business unit. (See the article on page 33.)

Lumber Sales & Products Inc. is located on 3.5 acres in Jackson, Wisc., roughly 30 miles northwest of Milwaukee and only about 20 or so miles west of Lake Michigan. The company has 31,000 square feet under roof among three buildings, employs 17 people, and

has annual revenues of about \$4 million. The company is mainly a manufacturer of new hardwood pallets although in recent years it has expanded into recycled pallets.

The Francois family has been in the forest products industry for generations. Jim's great-grandfather worked for a sawmill. His grandfather was a superintendent for Ford at the Pequaming and Baraga sawmills that supplied lumber for making Ford automobiles. Lumber Sales & Products is a family business that was started by Jim's father, Ken.

Jim has four other brothers who were involved in the business at various times. Joe left and started his own company Snowbelt Hardwoods, which sells grade lumber and has an affiliated sawmill and lumber remanufacturing plant that produces flooring and other products. Mike launched a pallet company of his own. Two other brothers were active in the company until Jim bought their interests

seven years ago.

His father worked as a purchasing agent for a printing business. He purchased rolls of paper for the company to supply its presses and frequently was in need of pallets to store and move them. He began building pallets for his employer in his spare time in 1960.

As his entrepreneurial endeavor blossomed and Ken began adding accounts, he got Jim's older brothers involved. The company eventually succeeded to the point that Ken left the printing company and worked full-time for himself. He also sold doors, 2x4 and 2x6 material, and paneling for a period of six to eight years, but then the pallet side of the business began growing faster and faster, and Ken exited the other business lines.

Jim Francois has worked in the pallet business since his boyhood. By the time he was 16 he was running a second shift when he got out from school. He took a break when he was about 18 and moved



**Cant Processing:** The cant line is all Cornell equipment. An automated cut-off saw cuts the cant to three lengths, and the pieces are conveyed to a double-arbor gang saw to be resawn into stringers, which are stacked by hand.

to Colorado to try something different, but he returned home to the family business a few years later.

There was a lot of “bull work” involved in the company’s early years, Francois recalled. The men used to load

the pallets onto a truck by hand and stack them 20-high by hand. Investing in automatic stackers and a forklift later was a major development. “To us, that was big,” said Francois, 59.

“It’s kind of funny if you think about

carrying pallets...20 to 30 feet onto a flatbed and stacking them by hand. It wasn’t much fun. I got big arms now, though.” It’s a far cry from the company’s current operations, which are now totally automated.

Lumber Sales & Products was the first pallet manufacturer in Wisconsin to invest in a Viking automated pallet assembly machine, according to Francois. It was in the late 1960s when the company took the step. Before investing in the Viking, six men nailing by hand could assemble about 800 pallets a day if they were lucky.

About 30% of the company’s business is in GMA pallets, but it also manufactures about 70 different size pallets. “We’re all over the board,” said Francois.

One customer needs a pallet eight-feet by 92 inches. The company also builds an octagon pallet that is used to transport spools of specialty steel wire to Europe; the pallet is about 52½-inches ‘square,’ the top face made of 10/4 lumber, and assembled with 4-inch nails.

Odd-size pallets are more profitable, noted Francois. Referring to the GMA



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**Updating Machines:** *Three years ago the company bought a newer version of its original Viking machine, a Duo-Matic, and had it converted by Pallet Machinery Service. The conversion made the machine fully computerized. The upgraded system can store 80 pallet footprints. The biggest pallet the company assembles on the machine is a 60x60.*

market, he said, “There’s hardly any money to be made in that.”

Francois prefers using different hardwood species for deck boards and stringers, such as oak deck boards with aspen stringers. It is a much stronger pallet, in his opinion.

The company uses the Pallet Design System©, the software developed by Virginia Tech for the National Wooden Pallet and Container Association (NWPCA). “I believe that’s helped our business a lot,” said Francois.

Lumber Sales & Products buys a wide range of hardwood material – ash, aspen, basswood, hard maple and soft maple, red oak and white oak. “Whatever species the sawmills cut,” said Francois. The company also buys red and white pine material for some applications, such as a top it makes for printing customers to protect a pallet load of printed materials.

The company relies heavily on Cornell machinery in its cut-up operations. (Cornell was later acquired by

Pendu.) For making deck boards the company buys 4x4, 5x4 and 6x4 material. First it goes through a Cornell five-head multi-trim saw to cut the boards to the appropriate lengths. The pieces are resawn by a McDonough 54-inch bandmill. The deck boards are automatically stacked by a Cornell stacker.

The company developed a little trick of the trade to help cut down on mold forming on freshly cut deck boards. When they are stacked automatically, heat emanates from the center of a tightly packed bundle on warm, humid days, noted Francois, promoting mold on wood that is still green.

After each layer is stacked, a worker on the back side of the pallet spreads it out, said Francois, just using a hand or knee to push the row out two inches. That allows air to get between each row and prevents mold. “It cuts it down close to 60%,” he said. “I know nobody else that does this. It’s just something we’ve learned over the years.” The same step

helps prevent pallet parts from freezing together during cold winter temperatures.

“We try to use fresh lumber all the time and not let it sit around and get moldy,” said Francois. The company cuts lumber every day.

A cut-up line in another building remanufactures cants into stringers. For these operations the company buys 3x4 and 6x6 cants in 8, 10, 12, 14, 16-foot and random length. The cant line is all Cornell equipment. An automated cut-off saw cuts the cant to three lengths, and the pieces are conveyed to a double-arbor gang saw to be resawn into stringers, which are stacked by hand.

An old Kenwell and Jackson notching machine equipped with Profile Technology heads cuts notches in the stringers. The shop also is equipped with a chamfer machine.

Three years ago the company bought a newer version of its original Viking machine, a Duo-Matic, and had it converted by Pallet Machinery Service. The conversion made the machine fully computerized. The upgraded system can store 100 pallet footprints. The biggest pallet the company assembles on the machine is a 60x60.

While most pallet companies probably use only one worker at each end, Francois uses two – a total of five employees plus a forklift operator. On a good day they build close to 2,400 GMA pallets. “I’m very proud of my

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**Unique Lumber Stacking Method:** *When deck boards are stacked automatically, heat emanates from the center of a tightly packed bundle on warm, humid days, this can promote mold growth on green material. After each layer is stacked, a worker on the back side of the pallet spreads it out to create about two inches separation. This step helps prevent pallet parts from freezing together during cold winter temperatures as well as mold growth.*

crew,” said Francois.

The reason they can build so many is a testament to the quality pallet parts the company uses, said Francois. They rarely experience jam-ups and other problems caused by poor lumber. “It helps when you don’t have any break-downs,” said Francois. All pallet parts are graded, and the low-grade material is sold to other companies.

The same crew that runs the Viking also assembles custom pallets by hand. The company uses Bostitch and Magnum pneumatic nailing tools and Magnum coil nails. For the Viking it uses Mid-Continent bulk pallet nails.

Sawdust is sold to farmers for animal bedding. Scrap wood is sold for firewood at \$10 for a pickup truck load. “It’s not the best situation for us, but it’s the only situation we can do right now,” said Francois. The company sought unsus-

cessfully to get permission for operations to process scrap wood into mulch, but, with the plant located in the middle of the town, it could not because of concerns about noise and dust.

The company is supplied by sawmills in upper Wisconsin and Michigan. In addition to buying rough hardwood lumber and cants, Francois buys some pre-cut stringers.

The company has been heat-treating pallets since it became an industry requirement for pallets used for exports. The facility is equipped with a Marshall-Henderson heat-treatment system that it runs about three times a week. “I would like to have more jobs for it,” said Francois.

The company markets on quality and service, such as on-time delivery, said Francois. “We don’t make any garbage.”

The company has lost only eight cus-

tomers over the years, and even in those few instances the reason had nothing to do with pallet quality. In some cases customers began shipping on CHEP pallets.

“We still have customers from 30, 40 years ago,” said Francois. “Not too many companies can say that.”

Lumber Sales & Products provides same-day delivery at no additional charge to customers. “It’s unusual, but we do it,” said Francois. “We get a lot of them. We call them 911 calls. They’re last-minute.”

Actually, there is too much last-minute business, added Francois. “They don’t want to keep inventory.” Customers want pallet companies like Lumber Sales & Products to carry the inventory and absorb the cost.

Lumber Sales & Products keeps a lot of pallets in inventory for some customers, particularly customers in the steel and plastic industries. Current inventory exceeds \$50,000.

One customer uses 20 different pallet sizes. “And you never know what size they’re going to need,” said Francois.

Three years ago Francois made the decision to enter the recycled pallet market.

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**Custom Pallet Designs Using PDS:** *The company also builds an octagon pallet that is used to transport spools of specialty steel wire to Europe; the pallet is about 52 1/2-inches 'square,' the top face made of 10/4 lumber, and assembled with four-inch nails.*

"It was something we didn't want to mess with," he said. "It turns out we're doing quite well with used pallets."

Although the company recycles pallets, it does not dismantle pallets to recover and recycle used lumber. It repairs pallets but uses new lumber for repair stock. The company's new recycling operation focuses solely on repairing GMA pallets. Scrap pallets that are destined for a pallet dismantler or grinder are sold to another pallet recycling business.

His decision coincided with the economic downturn. "We had a lot of customers...buying new pallets that wanted to switch to used ones," said Francois. The change also generated new business for the company; Lumber Sales & Products added 20 accounts since entering the recycled pallet market.

Francois has two sons who help him in the business. Jim Jr., 28, oversees the resaw operations and buys most of the company's lumber and nails. He is the vice president of the company. He also designs custom pallets for customers using PDS. Jason, 26, who works part-time, helps keep the company's computers running, designed a logo and devel-

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Jim Francois's day-to-day duties include sales, pricing and production scheduling. He cuts lumber and loads trailers if needed. He usually comes in at 5 a.m. and does not leave until 5:30 p.m. and frequently is at the plant on weekends.

A side business run by Jim's sister, Mary Francois, is Hardwood Enterprise, which warehouses and sells wholesale lumber as well as flooring, moldings, paneling and plywood. Mary is a certified lumber grader and has extensive knowledge to help customers pick the best building materials for each job. Harwood Enterprise offers twenty five species of lumber and wood products.

Lumber Sales & Products, which is a member of the NWPCA, has a 401(k) retirement plan for employees and contributes 3% of a worker's pay into it. The company also pays 70% of the cost of group health insurance for employees. (Premiums went up 17% at the last renewal, Francois noted.)

Fortunately, the company had no debt when the economy tanked a few years ago. The business had borrowed money in the past, but the debt had been retired. "If I was in debt during the recession, I probably would have had trouble getting through it," said Francois.

"The economy has really been tough," said Francois. "It devastated our business three or four years ago." Annual sales plummeted to \$2 million. "We had to make a lot of changes." It was the economic downturn that prompted the company to move into the used pallet market as well as to focus more strongly on custom pallets. "That really helped us out," said Francois.

"Now our sales are back up to where they were," he said, adding, "It's been difficult."

He also lost some customers because of CHEP's pallet rental business as Costco and other businesses required manufacturers to switch to the CHEP system.

At the time his father bought the property, the area was farms and fields. The town of Jackson has grown up around the company, which has outgrown its location. Francois has been trying to move to a bigger site in recent years.

"The biggest problem we have is our facility is just too small for doing all this," said Francois. "We definitely need more space." 

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# Company to Offer New Technology to Air-dry Pallets, Prevent Mold

By Tim Cox, contributing author

Wisconsin-based Lumber Sales & Products has developed a proprietary technology and method for air-drying pallets to prevent mold and mildew. The company's approach, which president Jim Francois plans to market, was in research and development for more than two years. It uses a regular 53-foot trailer van specially modified with vents and fans.

"A lot of people told me it wasn't going to work," said Francois.

Like other pallet companies, Francois experienced problems with mold forming on pallets. In hot, humid weather conditions, pallets made of green lumber loaded into a trailer would begin to grow mold in a matter of days along with the entire inside of the trailer.

The approach also relies on a system of staggering the stacks of pallets in the trailer. "You can still put them tight," said Francois, "but not tight side-by-side. You have to get air moving around the pallets."

"You don't lose any space inside the trailer," he explained.

The objective is to reduce the moisture content of the lumber down to 19%. At that percentage, there is not enough moisture to foster mold growth.

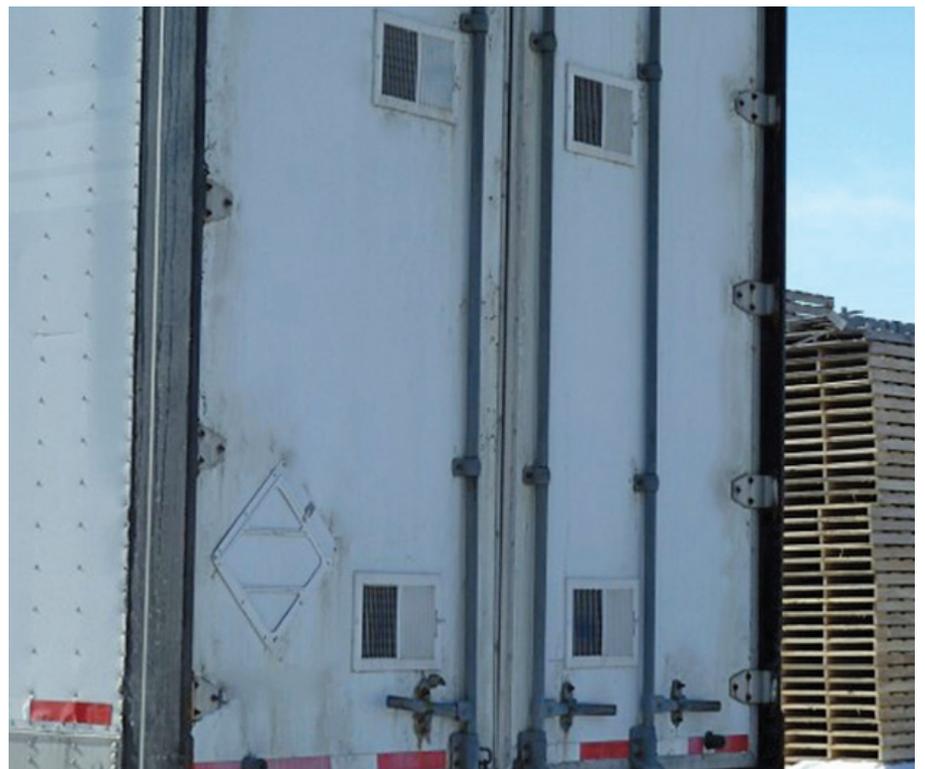
The technology also has proven effective at air-drying pallets during cold weather, noted Francois. Of course, the warmer the temperature, the faster the drying process. In summer months, the process dries pallets in about three days; in winter months, with temperatures in the teens or below, it takes about a week. Humidity is a factor, too.

The process was tested by the Sardo pallet lab at Virginia Tech and "came through with flying colors," said Francois. The tests showed pallets only had 0-5% mold. He has applied for a patent that he hopes will be finally approved in about six months.

"I really think this is going to help the pallet industry," said Francois, particularly those pallet companies that supply grocery manufacturers and other mold



**Scientifically Tested:** Jim Francois has launched a separate company called Air-Flow Trailer Systems to sell the service and retrofit kits. This process has been scientifically tested by the Sardo pallet lab at Virginia Tech. Francois said that the tests showed pallets only had 0-5% mold growth, which is an amazing success rate.



**No Chemical Treatments Required:** Although pallets may be treated with chemicals to prevent mold, many grocery manufacturing businesses will not use pallets that have been treated with chemicals, according to Francois.



**Stopping Mold Growth:** Jim Francois and his staff have developed a way to retrofit trailers to encourage air flow and thereby eliminate the necessary conditions for mold growth. Notice the fans at the end of the trailer and the vents at the bottom on the sides.

conscious industries.

Although pallets may be treated with chemicals to prevent mold, many grocery manufacturing businesses will not use pallets that have been treated with chemicals, Francois observed.

The process he developed also is much cheaper, said Francois. "This is a lot cheaper in the long run," he noted, than treating pallets with chemicals because it eliminates the recurring cost of purchasing chemicals.

It also enables companies to store pallets in trailers instead of shed structures, where birds and pests can contaminate the pallets with their feces. The modified

trailers have screens over the vents to prevent entry by birds and insects.

A stack of pallets is "just like a big birdhouse to them," said Francois. The birds will infest the pallets and contaminate them with their droppings, which have to be removed in order to make them acceptable to some customers.

Francois is discovering that the approach he developed for air-drying pallets may have other applications. "We're finding out now this would be great even for potato farmers," he said. "These vented trailers can be used for a lot of different things."

Francois is going to start another busi-

ness, Air-Flow Trailer Systems, to market the technology and will be seeking distributors in other states. Under the business model he plans, his company will provide the services to convert trailer vans for pallet companies at a cost of about \$3,600 per trailer.

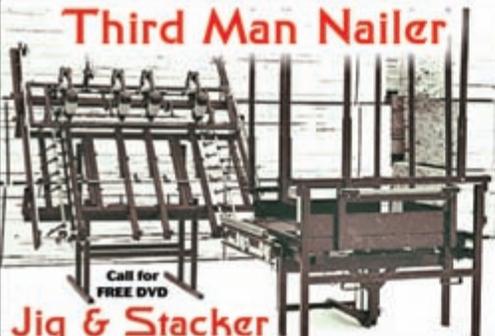
The trailer will enable pallet companies to drop-ship loads – deliver a trailer filled with new pallets and drop it off at the customer location. Without air-drying, a load of green pallets may turn moldy in a few days before the customer opens the van to begin using them.

"A lot of pallet companies don't understand," said Francois. Once a trailer van contains mold spores, it must be cleaned with bleach or some other chemical to eliminate them. Otherwise, the mold spores will continue to infest pallets that are stored in the trailer.

"This is really going to open up a lot of doors," said Francois, for pallet companies because eliminating mold will enable them to get new customers.

The website for the new business unit that will market the ventilated trailer system is [www.aftstrailers.com](http://www.aftstrailers.com) and the e-mail address is [aftstrailers@yahoo.com](mailto:aftstrailers@yahoo.com). The company will also be on Facebook.

For more information, call Lumber Sales & Products at (262) 677-9033 or e-mail [lumberpallets@sbcglobal.net](mailto:lumberpallets@sbcglobal.net). 



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