

California Firewood Business Gets New Life

Multitek Firewood Processor, Twister Industries Equipment Enable Company to Expand

By Thomas G. Dolan
Contributing Author

Boonville, Calif. — Frank Vaine has been in the firewood business for more than 30 years, but he is quick to credit his success to two equipment manufacturers he turned to in just recent years.

“I don’t want to sound preachy, but you can’t be successful only by standing on the shoulders of others,” he said. “And I have to credit much of my success to the Multitek firewood processor and the Twister Industries bundler — not only the equipment itself, but also the many suggestions from these two manufacturers.”

Frank’s company is called Frank Vaine Logging & Firewood. He came into the firewood business in a somewhat unusual way. He had planned to become a large animal veterinarian and was accepted on a University of California campus. After three days of class, however, he withdrew.

“My energy level was so intense I couldn’t see myself sitting in classrooms for 10 years,” he recalled. “I realized I needed physical labor to work that energy off, so in 1972 I moved into the woods with a chain saw and pick-up truck and started my firewood business.”

Many firewood operators start out as loggers, and they add a firewood business to generate additional income. In Frank’s case, he was involved in both from the start. Initially, however, he was harvesting trees solely for firewood.

“By 1980 I would say I was stabilized with a Cat D6 bulldozer, a good delivery truck, and a good wood splitter,” said Frank. I was producing about 500 cords a year, but by 1997 my equipment just wore out.”

Frank invested in a new Cat 966 log loader, a Cat 518 skidder, a Cat D6 bulldozer, and a Freightliner three-axle truck. He decided to expand by also cutting softwood timber that he would sell to sawmills.

He considered firewood processing



Jolene Vaine with company’s Twister Industries equipment, which is used to bundle firewood into packages covered with stretch wrap.

machines but rejected them. “Although we saw firewood processors advertised, we never saw any successful ones on the West Coast, and I thought the price were prohibitive,” said Frank.

In 2002, an insurance crisis forced Frank to rethink his position on firewood processing equipment. “In January 2002 the worker’s compensation insurance rates in California went through the roof,” he said. “They represented 115% of an employee’s salary. We had no choice but to automate or go out of business.” He began looking again at firewood processors.

At the least the timing of the rate hike was good. California law allows timber harvesting from April through November,

so January was down time. Still, Frank had to lay off his three good employees.

After an intense search, Frank decided to buy a Multitek firewood processor. He bought the company’s biggest, best model, the 3040XP90. (The 30 in the model number refers to the machine’s capacity for 30-inch diameter logs, and 40 refers to its 40-foot length.) The Multitek model 3040XP90 weighs more than 16,000 pounds and is designed and built for heavy-duty, commercial operations for log yards, tree services, wood recycling operations and landfills. It has a live deck that moves logs into the feed trough, and an overhead grapple system takes hold of the log and moves it to the bucking station, which is equipped with a bar saw. The cut pieces of wood automatically go to the next station to be split.

Was it a happy solution? Not immediately. After buying the machine, Frank called his insurance company and asked for a new, cheaper rating since the Multitek would eliminate the more dangerous work of cutting logs by hand with chain saws. “They refused and said it was still cutting firewood,” said Frank.

He appealed to the California Workers Compensation Insurance Rating Bureau. The agency sent a representative from San Francisco to watch the firewood processor in operation. He watched the machine run for about 10 minutes, then told Frank his rates would be reclassified and reduced by half.

“So we were able to hire again,” said

Frank. “Some times, something like the original rate increase, which threatened to put us out of business, turns out to be a blessing in disguise.”

Frank’s wife of 25 years, Jolene, learned how to run the Multitek. In addition to a part-time truck driver, Frank hired one full-time laborer. “I’ve always hired Hispanics,” said Frank. “They’re good workers, and I speak Spanish.”

With the purchase of the Multitek, Frank also changed his approach to hiring labor. Previously he hired strong, athletic types and paid piece rate wages. With the machine, size and strength are no longer important for a worker; he can hire someone who may move a little more slowly but is careful and methodical, and he pays them an hourly wage.

When April arrived, Frank was ready to begin the company’s operations again. Although from 1997-2002 he had cut both hardwood and softwood, he decided to return to his original strategy of working only with hardwood.

“Thanks to the Multitek, my productivity went from 500 cords a year to 1,200,” said Frank. “The Multitek paid for itself in two years.”

Frank went another step further in 2002, innovating his company’s operations with the purchase of equipment to package the cut, split firewood into convenient bundles for eventual retail sale.

“We had never done much with bundled wood,” said Frank. However, he began supplying bundled firewood — packaged in boxes — to a state park at the rate of about 2,000 boxes of firewood per year.

“Then they asked me to double it,” he said. “After thoroughly researching bundling machines, we chose the Twister because of its simplicity, and our costs went from 55 cents per box to 7 cents per bundle for stretch-wrapping. The savings alone on packaging material paid for the machine in three months.” The Twister will produce about 60 bundles of firewood in an hour, according to Frank.

A state park manager told Frank that if he could put a carry handle on the bundle, the park probably could sell more. The manager agreed to pay an additional 20 cents per bundle for adding the carrying handles. The handles cost Frank 4 cents per bundle, so he made an additional 16 cents profit on each bundle.

In addition, the addition of the carrying handles spurred sales. “They sold like hotcakes,” said Frank, “almost doubling to 7,000.”

Ergonomics is an important consideration to Frank in deciding how to locate his equipment and perform labor tasks. “We’ve found a way to bundle better than most,” he said. “We have a bundling station. The machine needs to be close to the

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wood, but rather than move the machine to the wood, I push the wood to the machine with a loader bucket a couple of times a day, so the wood is stacked up on a 3-foot bench in a tall pile.”

The worker stacks the wood into the 1 cubic foot crate for the Twister, but he does not have to bend over. Meanwhile, the person running the Twister picks up the crate and drops the wood into the machine while the other worker is loading another crate. “It’s a continual process,” said Frank, “but neither worker has to bend over.”

Instead of filling the crate to exact capacity, workers will overfill it if it makes the process go easier and faster — even if it means the eventual consumer gets more firewood.

“What makes the decision easier,” said Frank, “is that the Twister and the Multitek work well together. The Multitek makes the small, exact amount of firewood that fits into the Twister crates.”

The Multitek 3040XP90 is reasonably easy to learn how to operate, according to Frank. “Within two weeks a new employee can learn how to run it,” he said.

Frank processes a lot of relatively large trees — many are over 16 inches in diameter. The Multitek is used to split wood up to about 8 inches in diameter. He uses another home-made splitter powered by a tractor PTO — the machine was built by a farmer Frank used to work with — to split the oversize wood in two. The two pieces are then split into firewood on the Multitek.

“The Multitek has good ergonomics,” said Frank, “and by switching an employee off of that and doing other tasks, such as stacking wood, re-splitting or working with a chain saw, repetitive motions are minimized.”

Frank’s Multitek 3040XP90 is also equipped with an operator cab. “They had to talk me into it,” he said. “I didn’t want to buy it at first because of the expense, but with the cab you can keep the Multitek going in extremely hot or cold or wet weather with the operator working in comfort.”

The Multitek 3040XP90 is easily transported, and Frank normally takes it to the woods for work. “But the larger trees we ship by log trucks back to the yard. These trees keep us busy during the wet season that begins in November. So instead of working only about eight months of the year, we can go up to 11 months. That has increased our income.”

Frank began concentrating on large diameter trees after an experience he had when he first started. “We were working one side of a very large canyon while wood cutters about 20 years older worked the other side,” he recalled. “We would work our tails off but were only getting about half the productivity they were. I would watch them through my binoculars, and I couldn’t figure it out. One day I was able to visit their work site. I realized that while I was working with small, stubby, crooked trees, they were working with nice tall, straight trees. Then I understood that



Frank Vaine Logging & Firewood uses this Multitek 3040XP90 firewood processor to produce cut, split firewood; machine uses an overhead grapple to move logs firmly and securely into position to be bucked.

it involved more than just hard work. You have to know how to pick your trees. From then on, I started being much more selective.”

Frank sells 1,200 cords of firewood annually for gross sales of about \$240,000. Included in this amount are about 55 cords that go into the 7,000 packages of bundled firewood.

“Bundled firewood makes up about four percent of our volume but 10 percent of our net profit because of the Twister,” said Frank. Of the 7,000 bundles, about 6,500 go to the state park and another 500 to grocery stores.

Frank sells primarily to residential customers. For making deliveries, he has two three-axle, 18-foot flatbed trucks, a Freightliner and a Ford. He loads four cords onto each truck and within a couple of hours has sold one or two.

Some firewood businesses have begun delivering their firewood on pallets. “But we haven’t found that necessary,” said Frank.

The state park has a storage shed, and Frank is able to put a ramp from the back of the truck and slide the bundles into the shed. “We can unload 200 bundles in 15 minutes,” he said.

For residential customers, Frank normally dumps the firewood into the driveway. He used to move the firewood into the truck via conveyor, and workers stacked it by hand, but he stopped that practice.

Last fall, the owner of a large firewood business in New Zealand — who runs a Multitek firewood processor model 2040XP90 — visited Frank to watch his Multitek machine in operation. The New Zealander (his company has a Web site at

www.cityfirewood.co.nz) told Frank that stacking the firewood in the trucks was unnecessary and counterproductive. Two days after the visit, one of Frank’s workers filed a worker’s compensation claim, saying he injured his back while stacking the wood. Although the claim was denied, Frank decided that stacking the firewood was a waste of time and energy.

The Multitek uses a bar saw to buck the logs, and the bucking process generates a steady flow of saw dust. Frank was having a hard time finding a market to dispose of it. “I would deliver it for free just to get rid of it,” he said. His wife boxed some of the sawdust and called on homeowners with large gardens and landscape businesses, and now the company is selling the sawdust for \$5 a cubic yard. “We are about a year behind in supplying sawdust to local customers,” said Frank.

Frank has gotten strong support

from both manufacturers of the Multitek and the Twister.

“At first, I thought the Multitek machine, the top of its line model, was too expensive,” said Frank. “But I’ve seen how they’ve refined every detail of this machine down to perfection. I’ve created different type of machines myself to get something done, and I know how hard it is to get everything exactly right. But they’ve done it. If you do your math and figure it out, you realize you’re really getting a bargain.”

Frank is optimistic about the future and his business. “Some people are worried about the future of firewood,” he said, “that our trees are being used up. But it is a natural, renewable resource.” In the past, softwood forests were over-cut, he indicated, but they were regenerated by hardwoods. “Hardwoods grew in their place, and now there are huge forests of hardwood. Now they want to get back to conifers for lumber, so we’re pulling out hardwood like weeds.”

Frank advertises in the Yellow Pages, but about 90% of his business is repeat or by word of mouth. “One mistake a lot of people make is they base their price on what they think the competition is charging,” said Frank. “One of the things we do that has made us successful is we do the math and see what we need to charge. Those who under-sell themselves go out of business.”

Frank’s son, Neil, 18, used to help him in the woods but now is going to college to become a teacher. Jolene operates the Multitek about five hours a day before heading home, and their daughter, Hannah, 15, helps run the Twister.

Frank, 50, is a member of the Associated California Loggers, which helps reduce his insurance rates. He is active in a local Kingdom Hall church. He works from about 7 a.m. to 6 p.m. but takes weekends off. He likes to take his family on tropical vacations to places like Hawaii or Mexico.

“We’re making a good living,” he said, “so we don’t have any goals to get bigger. We enjoy the work and are doing very well without too many headaches, but I’m able to say that in large part because of the help I’ve gotten from the Multitek and Twister equipment.”



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