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# Wood-waste Heats Kiln-Direct Firewood Kilns at Iowa Firewood Products

By Diane M. Calabrese  
Contributing Author

PRESTON, Iowa — The inspired are often inspiring. So it is with Derek Heiar, president and CEO of Iowa Firewood Products.

Derek started his business as a part-time venture in 2001, while he was still in high school. Today, Iowa Firewood Products (IFP), which incorporated in 2009, has nine employees, a significant presence in the Chicago metropolitan area, and a reach that extends to the Northeast. Its focus is wholesale firewood.

From the start, Derek's company grew and grew fast. "I cut 20 pickup loads in high school for cash," he said. "And we sold out, so I did more." That's how it went, month after month and year after year.

By 2009, the focus had turned to premium firewood — uniform, clean and dry. That year, Derek purchased two gas-fueled firewood kilns from Kiln-Direct in Burgaw, N.C. In August 2011, aiming to substitute a less-costly fuel than liquid propane (LP), he added two wood-waste kilns from Kiln-Direct.

Derek emphasized that LP prices vary greatly across the country, making LP an economical choice in some places. But in the Hawkeye State, where he competes with farmers for fuel, Derek spent \$60,000 on the gas during the last year.

Because IFP strives for uniform pieces of firewood, much of the incoming raw material, such as ends of logs, ultimately become discards, or waste. Making use of that waste wood on-site for fuel has been Derek's goal for some time. He waited, however, to buy wood-waste fueled kilns until he could get models that did not require fuel feeds every four hours or so. (That arrangement would have required personnel working through the night.)

Business is so brisk at IFP that all four Kiln-Direct kilns — two gas and two wood-waste — are in use. The gas models likely will be replaced with wood-waste kilns in

due course. Prudent as he is passionate about his business, Derek explained the wood-waste kilns must demonstrate their mettle for an extended period before he makes the switch.

"It's going to be longevity" that determines whether the switch to all wood-waste kilns is made, said Derek. "As far as the kilns are running right now, they're excellent."

Derek added that he expected no less than excellence, given his experience with Kiln-Direct. "Their support is second to none," he said of Kiln-Direct. "They follow through with whatever they say. Their statistics are right on...their statistics are accurate."

Moreover, explained Derek, the members of the Kiln-Direct team take a genuine interest in his business. The frequently visit to glean information that leads to product and process improvement on both sides.

The passion that Derek has for IFP is matched by the passion that Niels Jorgensen, owner of Kiln-Direct, has for his company. Fittingly enough, it is Niels who has made it part of his business strategy to share as much information — the "statistics" that Derek referenced — with all comers.

For example, Niels methodically compiles research data about optimal wood drying techniques and evaluates the performance of equipment from Kiln-Direct in that context. He anticipates that kiln-dried firewood may become the standard for bundles, generally the 3/4-cubic foot packs sold at retail outlets. He also envisions a future point when U.S. Department of Agriculture (USDA), which sets standards for firewood, will require heat-treating (at 160F for 75 minutes) to kill insects and pathogens.

The good news is that reducing the moisture content of firewood also increases its heating value per unit weight. Why?



*Iowa Firewood Products staff includes (left to right) Derek Heiar (owner), Mike Holdgrafer, Adam Riepe, Avery Bell, Matt Gerardy, Andy Johnson, Tony Camp, and Danny Ernst.*

With 20 percent (or more) of the water removed, the carbon-based fibers, the combustible entities, are compacted and account for more of the weight. A fresh-split cord yields only about 70 percent of the BTU output that a kiln-dried cord does, with actual BTU value varying by species.

Another great outcome of kiln-drying extends to everyone in the firewood chain: Shipping costs drop per BTU delivered.

IFP spans a three-acre site in the town of Preston (population 950) in Jackson County, Iowa. Preston is 25 miles west of the Mississippi River and 50 miles south of Dubuque, Iowa.

During the last year, IFP added a packaging operation — shrink wrapping through palletizing — under roof. That is the sum of what Derek wants to disclose about the expansion because of the competitive nature of the logistics of such installations.

With no family ties to wood products, how did Derek settle on firewood? "Trying to make a dollar, that's what I was wired to do," said Derek. "Firewood — I just chose it to invest in. I love what I do." Dealing with myriad challenges, finding solutions and seizing opportunities for growth are as rewarding as anything imaginable, he explained.

Derek cites many who have helped make IFP a success. "I have to give a lot of credit to my guys," he said. "They are all awesome. I really have to compliment every one of them."

Sustained thanks also go to Jack Foss, owner of Lumberjacks, Inc., in Woodstock, Ill. Derek explained that hungry for information borne of experience, he picked up the phone in the early days of his business and called Jack, seeking advice. Thus began a relationship that flourished; and he considers Jack a mentor in wood products.

"He is the one who stood with me," said Derek of Jack. "He bought wood off me. He even bought wood in summer."

Derek's father also gave him a significant assist in the early days of IFP by helping him build a small hydraulic splitter. He considers his father, who owns a bridge painting business, a mentor in business. (Derek still has the splitter.)

In 2003, Derek bought a model 18-20 firewood processor from Blockbuster® in Mount Pleasant, Iowa. It did not see much service until 2005 when IFP began a full-time operation. The choice of Blockbuster was initially based on proximity and ease of replacing parts. "They are just two hours from me," explained Derek. And the availability of parts, "all over-the-counter — everything was made in the United States," made the purchase especially attractive.

Across more than eight years, the Blockbuster process has proven itself a real workhorse at IFP. Blockbuster has been ISO 9001 registered since 2007.

"We try not to touch any wood more than we have to," said Derek. Logs come in and move directly to the firewood processor. As they come off the processor, they are conveyed directly into kiln baskets. When removed from the kiln, the baskets go to the packaging center where pieces of firewood are wrapped and bundled.

The two Kiln-Direct gas kilns each have a five-cord capacity. The two wood-waste kilns from Kiln-Direct each have a six-cord capacity. Ninety-five percent of the product leaving IFP is kiln-dried firewood.

"Typically, we send out four to five semi-loads per week," said Derek. Raw material comes from within a 150-mile radius of Preston and derives from Wisconsin and Illinois, as well as Iowa.

"We have our own logging crew," said



*Bundled, wrapped, and palletized dry firewood ready for shipment. This picture is a good representation of a quality firewood company.*





*In August, 2011, Iowa Firewood added two Kiln-Direct wood-waste fired kilns to his two gas-fueled firewood kilns. Derek has been happy with his two new wood-fired units and is attempting to reduce his energy expenditures due to the high cost of liquid propane.*



*Log yard of Iowa Firewood Products with split firewood. The company uses a Blockbuster model 18-20 firewood processor (inset).*

Derek. “We also buy from independent loggers. We do a lot of clear-cutting. I take a firewood job over grade [whenever possible]” A buyer is called when grade lumber enters the picture.

The IFP logging crew hand cuts with Stihl chain saws. A John Deere 548E is used to skid to a landing. A 2000 Peterbilt tractor is the heart and soul of his trucking operation; Derek bought a 2010 Peterbilt new. IFP also owns a Wilson belt-floor trailer. Some product moves from tractor to rail in Chicago.

By the time Derek bought his first kilns from Kiln-Direct, he had a good idea of what he wanted. “I did a lot of research,” he said. He had also had some experience with a hot-water kiln.


Mixed hardwoods are the mainstay at IFP. Oak, hickory, cherry, elm, walnut,

maples, hackberry are all processed and dried. There are no species sorts. The waste-wood kilns dry wood more slowly than the gas-fired kilns, but the fuel savings makes the tradeoff – 30 hours vs. 20 hours — worthwhile, said Derek.

Quality is the top priority at IFP. “We could crank out more wood,” said Derek. “But we spend more time to get clean, dry wood.” Screens are used on the front side to capture debris attached to incoming logs, for instance. And two employees work downstream on the splitter, pulling pieces that ought to be re-split or jettisoned.

The Blockbuster firewood processor receives the log on the outside of the new building, but pieces drop into kiln baskets on the inside of the building. The under roof arrangement bumps up quality another notch.

IFP is a USDA-certified producer of firewood. And it is looking to grow, said Derek, who emphasized that his philosophy of doing business involves working with his colleagues across the industry. Other firewood producers have developed their own best practices and streamlined logistics, he explained. And he respects everyone he meets in the industry. Learning is part of growing.

As for free time, Derek does think about IFP and improvements a great deal, but other things do interest the 28-year-old business owner. “I like anything with action,” he said. “I golf. I like football. As a co-owner of a 180 Cherokee four-seater, I enjoy flying.” 



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