

Kiln-Direct Installs New Commercial Wood Waste Firewood Kiln at Tetreault & Son Forest Management

By Diane M. Calabrese

BRIMFIELD, Massachusetts – Flexibility to adjust to changing market conditions is not an option in 2016. It's a must.

According to both Roger Tetreault, president, and Brian Tetreault, vice president, of Tetreault & Son Forest Management, "the need to make money every day," is the straight-up philosophy that guides them in their profession. Across the years, they have adjusted and readjusted their operation to keep pace with shifting market forces.

Tetreault & Son has included firewood on its product roster from the time it started doing business as a father and son partnership in 1992. (Brian Tetreault is Roger's son.) Roger has been in the logging industry – and selling firewood, since 1962. Today, the company produces 7,500 cords annually of which approximately 6,000 cords are kiln-dried.

By producing firewood, Tetreault & Son is able to extract the maximum value from every fiber of wood harvested. The production complements the ability to meet the needs of buyers in varied markets for logs, such as in pulp, saw, flooring and pallet grade. With a firewood component, the company can reconfigure itself to align with markets.

The firewood component at Tetreault & Son relies on four kilns from Kiln-direct in Burgaw, N.C. In addition to three 6-cord MiniQuick kilns from Kiln-direct, there's a new 12-cord SmallQuick kiln from Kiln-direct. The SmallQuick and one of the MiniQuick units use sawdust as fuel, while the other two MiniQuick kilns use wood waste as fuel.

The sawdust-fueled, 12-cord SmallQuick kiln is the first of its kind. "Tetreault – they were the guinea pig or test



Each of the 24 baskets in the 12-cord SmallQuick kiln hold some 100 cubic feet of loose firewood. Tetreault and Son currently produces 7,500 cords annually of which approximately 6,000 cords are kiln-dried.

customer for the 12-cord SmallQuick," said Niels Jorgensen, owner of Kiln-direct. The goal was to make a SmallQuick kiln that could reach a sufficiently high temperature to dry firewood using sawdust or wood waste or industrial waste in a time comparable to using gas as a fuel. The fuel capacity of the SmallQuick chip bin lasts several days which means lower labor cost than the original MiniQuick kiln.

With the forbearance of Tetreault & Son allowing the team from Kiln-direct to make some modifications at its site, the 12-cord SmallQuick kiln that uses sawdust, wood waste or industrial waste, was perfected. The kiln has been formally introduced to the Kiln-direct product line for 2016.

Tetreault & Son has long had a good working relationship with the team at Kiln-direct. "We chose Kiln-direct for the technology of the kilns and the high-end production of the kilns," said Roger. "We have

had trust in Kiln-direct from day one."

Kiln controls provided by Kiln-direct simplify operation. The kiln has its own computerized control system. Temperature and other internal sensors allow the control system to operate all the mechanical parts for best performance.

One way they assess the efficiency of the Kiln-direct kiln is this: "We rarely see any smoke out of the chimney," said Roger. That's because the chimney flue gas fan and combustion fans are frequency driven. By constantly changing the fan speeds the system raises the efficiency and insures complete/cleaner combustion, he explained.

The Kiln-direct kilns also have many features that help streamline the entire firewood drying component of business. "For recording purposes, the kilns are linked wirelessly to the office computer to create reports for USDA compliance," said Roger. "You can follow the kiln operation on the



Shown from the back side, the new 12-cord SmallQuick firewood kiln from Kiln-direct features a wood waste storage bin that provides fuel for several days of operation.

office computer and Kiln-direct can even be invited into [the system].” The latter feature makes it possible to get remote assistance via internet from Kiln-direct. Furthermore, the latest software upgrade includes email notification to smart phones whenever there is an issue or problem on any of the kilns. These same notifications are sent to Kiln-direct so they can better help if called for assistance.

“All the logs that are used in our firewood operation are from timber that is harvested from Tetreault & Son jobsites,” said Roger. “We use a number of species, which include red and black oak, soft and hard maple, birch, ash and beech.”

Firewood is processed with two Multitek 2040 firewood processors, a 2009 Multitek 2040 XP2 and a 2002 Multitek 2040 XP. Each processor sends cut and split firewood along a conveyor system that drops pieces into kiln baskets. Roger and Brian have “had a longstanding relationship with the Multitek Company.”

Each of the 24 baskets in the 12-cord SmallQuick kiln hold some 100 cubic feet of loose firewood. Drying temperature in the kiln chamber is 250° to 260° F. The 12-cord SmallQuick also includes a firebox with step grate and automatic ash removal. The stainless steel air-to-air heat exchanger

is placed on top of the firebox. It transfers the heat from the combustion into the kiln air. The kiln also features heat recovery on the venting system, where hot and humid exhaust air pre-heats the incoming air.

Tetreault & Son sells both palletized half cords and packaged bundles. A bundling system from WOOD-PAKER™ is used to put firewood in .75 cubic feet bundles. Firewood deliveries are made with a 2005 Moffett Mounty M5000 and a 2004 Trailmobile box trailer. The Moffett Mounty truck-mounted forklift allows for easy loading and off-loading of palletized firewood.

Seventeen employees keep Tetreault & Son running smoothly. Timber harvesting is done with a combination of equipment that includes a 2011 TimberPro track machine with a Risley 820-D cutting head, a 2013 John Deere forwarder, a 1978 208 skidder, a 2016 Deloupe log trailer and a 1988 Great Dane TL trailer.

Four loaders – a 1996 Caterpillar IT28F, a 1997 John Deere TC44H, a 2002 John Deere 624H and a 2015 John Deere 332E skid steer, are also on the equipment roster. The roster is filled out by a 2013 Kenworth with a 2012 Rotobec Elite XT Longframe loader and a 1999 Kenworth T800.

Brimfield, Massachusetts is home to Tetreault & Son. Brimfield is part of Hampden County in the western part of the Bay State. The town has a population of about 3,600.

Tetreault & Son delivers firewood within its home state, as well as in Connecticut, New York, Rhode Island, New Hampshire and Vermont. Firewood customers, which include wholesale and retail distributors, can choose a delivery of loose or stacked wood. They can also buy by the bundle.

With the SmallQuick and MiniQuick kilns from Kiln-direct, Tetreault & Son is able to both heat treat firewood and kiln dry green firewood. The Massachusetts Department of Agricultural Resources certifies the heat treatment (160° F for a minimum of 75 minutes) of Tetreault & Son firewood. The kilns are also certified by the USDA for heat treatment (140° F for a minimum of 60 minutes).

To promote its firewood, Tetreault & Son uses the website woodbundles.com. “Our website is another great way of advertising the products that our company offers,” said Roger. The company sells firewood all year around.

“The changes that lie ahead each day” are what Roger and Brian most enjoy about

their profession. Updating equipment to attain the optimal match with the operation and thereby ever-more efficiency, is part of what constitutes the change.

Being a good steward of the natural resource that is wood fiber has always been important to Roger, who started cutting and selling firewood while he was in high school. After military service in Vietnam, Roger took a break from the wood products industry to work for Alleghany Airlines. Yet he soon discovered he missed the forest.

Tetreault and Son does primarily selective cutting on privately-owned land. Each piece of land is harvested by Brian Tetreault and his crew. The company's efforts ensure that the tracts of private landowners will continue to produce timber, as well as be sustainable (and suitable) habitats for wildlife and contribute to healthy watersheds (and freshwater reserves).

The round wood produced by Tetreault and Son is sold both domestically and exported. A large portion of the wood is sold

as sawlogs to Hull Forest Products in Pomfret, CT while a large portion also goes to Canada.

Tetreault & Son is a member of the Massachusetts Forest Alliance. Brian Tetreault is also a certified member of the Northeast Master Logger Certification Program. NEMLC offers third-party certification of the harvesting practices of logging companies. NEMLC is headquartered in New Gloucester, Maine.


The Trust to Conserve Northeast Forestlands of the Forest Stewardship Council™ (FSC®) is the parent organization for NEMLC. The rigor of MLC through NEMLC means that competencies must be demonstrated annually at point of harvest in order to maintain certification.

Several family members are part of the team at Tetreault and Son. Brian, who is a 50-percent co-owner with Roger, manages operations in the woods. Jeremy Lamica, Brian's nephew, oversees the firewood operation and the yard. Alanna Lamica, Brian's niece, runs the office. Patty, Brian's wife, does billing and prepares paperwork for accounting purposes.

Many employees at Tetreault & Son have worked for the company more than 20 years. The focus – just one job at a time – and commitment of the leadership have clearly translated into focus and commitment all around.

Leading a successful wood products business in 2016 requires a combination of deep expertise and determination. Both Roger and Brian have used their many years of experience in the timber industry as the context for being ready to change as necessary. When they see an opportunity to expand in one area because another area has contracted, they have taken it. **The addition to Tetreault & Son of the newest kiln from Kiln-direct, the 12-cord SmallQuick kiln, which is being fueled with sawdust, is a perfect example of the way in which they have long used a challenge (in this case minimize the cost of heat treating and drying) to seize an opportunity.**

In free time – after long hours in the woods and presiding over Tetreault & Son, Roger and Brian have some definite interests to pursue. They are both avidly involved in classic cars. Roger and his wife Rose also try to spend their summer weekends at Bolton Landing, New York where they have a boat.

They thoroughly enjoy their time off spending time together as a family  which is most important.



The new SmallQuick kiln uses sawdust, wood waste, or industrial waste, which is stored in the bin (shown above). The bin feeds a funnel that drops wood waste into a screw conveyor that then lifts it up at a 45° angle into the top of the firebox (shown below). Tetreault & Son assisted Kiln-direct by allowing modifications to be made at its site, where this new wood waste system kiln was perfected. This new kiln has been formally introduced to the Kiln-direct product line for 2016.



kiln-direct.com

Kilns for lumber, pallets and firewood

Mini Firewood Kiln



6 cord MiniQuick

- Wood waste or gas heat
- Easily meets 160F/75mins
- Heat treat in 8-16 hours
- Kiln dries green firewood in 1-2 days
- 6 cord capacity

MiniQuick firewood kiln has been specifically designed to dry and HT firewood quickly and efficiently

Small Firewood Kiln



New Kiln Model

12 cord SmallQuick

- Wood waste heat from chips, mulch, sawdust (picture) or gas heat
- Chip bin last up to 60 hours
- Easily meets 160F/75mins
- Heat treat in 8-16 hours
- Kiln dries green firewood in 1-2 days
- 12 cord capacity

SmallQuick firewood kiln has been specifically designed for the large industrial firewood operations

Small Lumber Kiln



9000-21000 bf

- 9000-21000bf capacity (modular up to 30000bf)
- Industrial design and structure
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- Full featured computerized controls
- Optional wood MC% meter with 6 MC points
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