They Make Charcoal From Wood, Livestock Bones

You can make "biochar" or "bone char" with the Exeter Charcoal Retort from Exeterra, LLC. The 3,000-lb. all steel unit uses a small amount of wood to begin the charcoal process before switching over to burn the volatile gasses in the char-making chamber.

"The Exeter is designed for farm-scale conversion of wood to charcoal and bones to bone char as a way to increase revenue," says Scott Bagley. "It is a versatile machine that allows farmers to add value to waste or low value materials."

The 8-ft. long by 6-ft. wide Exeter consists of a firebox underneath a chamber built to hold a cord (2 cu. yards) of wood or livestock bones. That includes green-cut wood up to 6 ft. long and 6 in. in diameter. No external power source is needed.

Once the fire is lit in the firebox, the organic material in the retort chamber heats and gives off moisture and non-volatile gasses. Once it reaches the point where volatile gasses are released, exit flues are adjusted to direct them to the firebox. From that point on, the unit is self-sustaining. When all the volatiles are released and burned, all that remains is biochar or bone char. One batch produces around a cubic yard of charred material a day.

The Exeter can be mounted on a trailer for mobile operation. It can be pulled to a site where wood, bones or other materials are being harvested, leveled with corner posts, and the process begun.

Bagley is working with a local metal fabricator to make the Exeter. The price ranges from $20,000 to $25,000, depending on options. While the payback on charcoal selling at $10 to $12 for a 15-lb. bag might be slow, Bagley suggests that bone char could be a higher value product. It is 60 to 80 percent tricalcium phosphate and recommended as an organic fertilizer.

"It would be ideal for a Community Supported Agriculture marketer who sells meat and has to pay a fee for offal disposal," says Bagley. "They could take the bones back and make another product to sell or use it in their own soils."

Bone char is being used by some specialty restaurants in place of charcoal to grill foods. According to an article in the Biochar Journal, bone char is also used in sugar refining, water treatment and in pigments.

Bagley is not only selling the Exeter, but is setting up a collaborative network called Back Forty Colliers to help users market their products.

Contact: FARM SHOW Followup, Exeterra, LLC, 340 West State St., Unit 8, Athens, Ohio 45701 (ph 740 818-4017; www.exeterrallc.com).

Exeter Charcoal Retort is designed for farm-scale conversion of wood to charcoal and bones to bone char.

There is a firebox underneath the 8-ft. combustion chamber. No external power source is needed.

"Made It Myself" Garden Tractor Loader

"When I first started building it, I figured I was making myself a toy, but the loader has turned out to be handy for many jobs," says Dennis Gintowt about the loader he built for his 1972 Deere 112 garden tractor. "The bucket holds a little more than you can get in a wheelbarrow so it's like a motorized wheelbarrow."

With weights on back of the tractor, he can pick up as much as 500 lbs. with the loader. It's handy for loading firewood in the pickup, spreading fertilizer, handling bark mulch, and scraping the driveway in winter.

Gintowt started with plans for a Cub loader tractor he had purchased and modified them to fit his Deere. He used 2 by 2, 1/8-in. tubing for the arms and 4 by 4, 1/4-in. steel for the towers, one of which holds the hydraulic fluid. He built the bucket out of flat stock and estimates the whole thing weighs about 450 lbs.

He drilled holes on the tractor to bolt the loader on, but otherwise didn't have to change anything on the tractor. With nearly 40 years of welding experience he had all the tools and skills necessary to build the loader, but it was his first time working with hydraulics. He lost some fluid in the process, but with trial and error and the help of a friend, he figured it out.

It took Gintowt about a year to complete the loader, with a lot of time spent planning.

"You don't want to hurry the project," he advises, noting he took his time planning important details such as placing the hydraulic pump so the wheels didn't hit it, for example.

After eight years of use, there is only one thing that would make it better.

"I wish it was a 4-WD tractor for digging in the dirt," he says. It easily handles loose dirt, but doesn't have the traction for digging packed dirt.

Contact: FARM SHOW Followup, Dennis Gintowt, 68 Line St., Southampton, Mass. 01073 (ph 413 527-8699; dengin0551@verizon.net).

Dennis Gintowt built this front-end loader for his 1972 Deere 112 garden tractor. With weights on back of tractor he can pick up as much as 500 lbs. Hydraulic pump is belt-driven off the engine and positioned so it doesn't hit tractor's front wheel.

"Plug And Play" Garage Door Opener

This new garage door opener does more than just open your garage door. It's designed to accept compatible "plug and play" modules that plug into the opener's base unit.

The Ryobi GD200 garage door opener comes with a powerful 2 hp. motor that's designed to be 20 percent quieter than other garage door openers and opens and closes doors 20 percent faster, says the company. Modules available for the system include a fan, 30-ft. retractable cord reel, bluetooth wireless speaker, and laser park assist module. An app can be downloaded to make personalized settings for each module and to remotely open and close the door.

The fan comes with an adjustable speed setting and a dual-pivot point that lets you direct the air in any direction. The retractable cord reel has 3 outlets. The bluetooth speaker allows you to stream full audio from your smart phone up to 30 ft. away. It also comes with an integrated microphone that allows making hands-free phone calls. The laser park assist module has a pair of ultra-bright lasers that activate whenever your garage door opens, helping to guide you and make sure you park the right distance from the garage wall.

The GD200 comes with a multi-functional wall control, wireless keypad, two remotes, safety sensor and a motion-controlled overhead LED light. It's compatible with Homelink and is Wi-Fi connectable. A lithium-ion backup battery that can make more than 100 door openings is available for use during power outages.

The GD200 is sold at Home Depot and through the company's website.

Home Depot sells the opener for $248; the retractable cord reel for $64; the fan for $54; the laser park assist for $44; and the bluetooth speaker for $54.

Contact: FARM SHOW Followup, One World Technologies, Inc., P.O. Box 1207, Anderson, S.C. 29625 (ph 800 525-2579; www.ryobitools.com/gdo or http://www.homedepot.com/p/Ryobi-Ultra-Quiet-Garage-Door-Opener-GD200/206830652).

"Plug and play" modules plug into Ryobi opener's base unit. Modules available include a fan, 30-ft. retractable cord reel, Bluetooth wireless speaker, and laser park assist module.