

"It'll take big diameter logs and split them nice and clean," says Dan Scherzer about the guillotine-style splitter he built and mounted on back of his Farmall tractor.



## Powerful Guillotine-Style Wood Splitter

When Dan Scherzer bought a used Farmall tractor, the farmer he bought it from insisted that he look at a neighbor's wood splitter. The guillotine-style splitter was attached to a tractor but mounted on its own axle. It was impressive enough that Scherzer went home and built a similar one to mount on the Farmall.

"It has never bent a cylinder," the Freeland, Mich., mechanic/welder says. He spent only about \$200 to build it, using mostly scrap materials, including old forklift parts including the pto pump, air tanks that hold hydraulic fuel, and the 2 1/2-ft. splitting wedge. He welded the setup on the tractor hitch and back end of the tractor.

A 4-in. cylinder with a 20-in. stroke provides the splitting power. Two pipes on either side provide support. Expanded metal

welded on an I-beam keeps the blocks of wood from sliding around. Scherzer operates a lever on the left side to drop and lift the cylinder.

"I like them because it'll take big diameter logs and split them nice and clean. I can split a big log three times and turn them and have six nice pieces," Scherzer says.

Scherzer has built four wood splitters over the years - all have been different. His tractor/guillotine splitter has been dependable and efficient. Though it can be removed, he leaves the splitter on the tractor all the time.

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Edwin Bienvenue mounted a Deere backhoe on his Allis Chalmers C loader.

## Front-End Backhoe Powered By Rear-Mount Hydraulics

After buying a 1973 Deere backhoe, Edwin Bienvenue discovered his C Allis Chalmers wasn't big enough to handle it as a rear mount. Instead of trading tractors, he mounted the backhoe on the 1946 C's front-end loader and installed a platform on back of the tractor to hold a stand-alone hydraulic motor and pump off a Troy-Bilt wood splitter.

"I call it my Allis Chalmers/John Deere/Troy backhoe," he says. "Mounted on my loader arms, I can pick it up and set it where I want it. I've done a lot of digging with it, both digging ditches and burying stumps."

Bienvenue bolted a length of 8-in. angle iron across the backhoe's original mount. He installed plates on the angle iron that pinned to the arms of the loader. In lieu of the top-

link on a 3-pt. connection, he bolted a brace from the backhoe to the crossbar on the loader arms.

The power unit from the 27-ton Troy-Bilt splitter is a 2005 Briggs and Stratton engine and hydraulic pump. Bienvenue bought the splitter and then stripped the cylinder and wheels and mounted the unit on a rear-mounted platform. He also mounted cement weights on the platform to balance out the weight of the backhoe.

"The loader easily handles the weight of the backhoe as long as I don't run at full speed," says Bienvenue.

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## They Help Customers Catch, Use Rainwater

Just one inch of rain on a 1,000 sq. ft. roof gathers 600 gal. of water. Saving that water is especially important in dry areas like Arizona or in other areas in the South. But the idea can save money anywhere.

Margaret Nicoll, co-owner of High Desert Rain Catchment, explains that some auto dealerships wash their cars every couple of days. After washing, they have to dry the cars. But with a rain catchment system, one dealership discovered something.

"Rainwater is so soft they don't have to dry the cars anymore, so they cut down on labor and water," Nicoll says.

The systems also work in cold weather climates as long as pipes are blown dry for winter. A recent customer in Iowa was regularly hauling 12,000 gal. of water to his vineyard during a drought. He's installing large underground tanks and plans to trench lines from multiple roofs to fill them.

Adding a line of underground and above ground storage systems was a natural addition to the landscape business of Nicoll's brother, McRae Nicoll. He got started making water storage systems for vegetable gardens during a drought five years ago.

"We promote doing laundry with the rainwater, then using that grey water on plants. You slow down the loop and more slowly percolate the water into the aquifer instead of the sewer," Nicoll says. "You're taking your water supply into your own hands."

Rainwater is softer for doing laundry and better for plants.

The company offers a variety of systems including passive irrigation, pressurized



An Arizona company offers a variety of rain catchment systems designed to trap rain water in large quantities.

pumps with irrigation inter-tie, underground tanks, earthwork systems that utilize berms and swells, and greywater systems with branch draining systems.

Nicoll says, "The most popular size is 1,000 gallons." Generally, the installed tank price is \$2 to \$2.25/gal., which includes the tank (made of food grade plastic) and a simple above ground gravity feed system. Prices vary according to soil type and the system."

Other companies, such as Rain Harvest Systems with a store in Cumming, Georgia, offer similar products from rain barrels to complete systems.

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On-farm manure-burning system gasifies manure and uses the gas to heat water to produce steam. It also powers an electrical generator and supplies the farm's hot water needs.

## Manure Burner Pays For Itself And Then Some

Manure is becoming hot property with the price of fertilizer going through the roof. Paul Schneider, president of EcoCombustion Energy Systems, has found a new way to profit from manure - he burns it.

Schneider designed and installed a system he calls Elimanure on a 1,700-cow dairy in Wisconsin. Elimanure does more than burn manure. It gasifies the manure and uses the gas to heat water to produce steam to power a 600 kW electrical generator, as well as satisfy the farm's hot water needs. Once the system has started, burner heat is also used to dry the manure - a combination of liquid, dry pack and parlor water - down to a 40 percent moisture level.

Schneider says the aerobic system virtually eliminates odor. Burning manure traditionally produces a lot of particulates in the air as well. Schneider has designed a cyclone system with a dust collector that reduces the problem.

Some of the dried manure is used for bed-

ding but the majority is burned. The combustion process reduces volume by 98 percent, saving large dairies the cost of removal and spreading. Weise Brothers Farm, where Schneider's system has been installed, produces 25 million gallons of manure a year. Manure hauling costs ran \$350,000 per year in the past.

Elimanure not only eliminates the bulk of removal costs, it also generates income by selling excess electricity to the local utility. Schneider projects payback of the \$4.5 million system of pumps, auger/mixer, fans and combustion unit in less than four years. A positive cash flow is expected within the first year.

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