

Stump Grinder Built For Garden Tractor

"I have a nice shop, so rather than spend \$2,500 on a stump grinder for my tractor, I decided to make one myself," says North Dakota inventor Evan Waa. The machine he built resembles a commercial model made by Woodland Mills, a Canadian company.

"My grinder mounts on the 3-pt. hitch of my open station Kubota BX2200, a smaller garden tractor that I can maneuver in and around trees," Waa says. The tractor has 22 hp. and a 540 pto.

Waa used 2 ft. of 3-in. square steel tubing to build the frame for his grinder. The 24-in. dia. cutting disk is made of 3/4-in. steel fabricated by a metal shop. The disk is bolted to a 1 3/8-in. 6-spline drive shaft that connects directly to the tractor with a flexible slip-clutch style pto shaft.

Waa used his plasma cutter to fabricate the body pieces out of 1/4-in. thick sheet steel that came from metal workbenches damaged in a fire. "I pre-cut slots, so the pieces connect front and rear like a tongue and groove arrangement. I put a flex joint in the middle of the grinder so I can slow down, creep ahead and back up while the wheel is turning," he says. The pto shaft extends out as the grinder flexes. Waa runs the grinder with his tractor at half throttle.

"The grinder easily cuts an inch to an inch and a half at a time using 34 teeth mounted on the cutting disk. The teeth cost \$6.60 each, but they're carbide tipped and do an excellent job of cutting," Waa says.

"I've probably cut out 30 or more stumps with the grinder without any problems," Waa adds. "At first, I went too fast over some stumps and killed the tractor, so operating it took a little getting used to. I set up a piece of snow fence on the side of the machine to keep the chips in a pile so they're easier to clean up."



Evan Waa used his laser cutter to make body pieces for his shop-built stump grinder from an old welding table damaged in a fire. Waa says the laser does an excellent job of minimizing waste while cutting different size pieces from a large sheet of steel.



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Zero-Turn Add-On Gives A Smoother Ride

The Terrain Tamer from Davaus will give zero-turn mower operators a smoother ride. The attachment utilizes suspension design features well-proven in motorcycle and agricultural markets.

"Zero-turn mowers pretty much own the landscape and larger homeowner market," says Dave Hockemeyer, Davaus. "The ride can be rough because they don't allow the wheel to move up and down. The Terrain Tamer allows a scissor action with the polymer dampener absorbing shock."

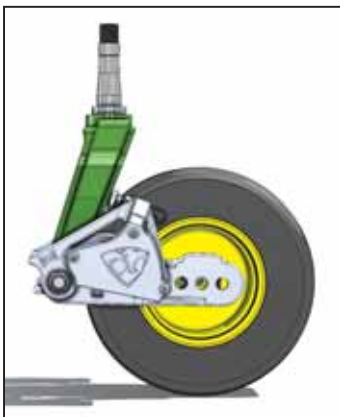
Installing the Terrain Tamer requires reversing the fork on the front wheels. The fork is attached to the Terrain Tamer assembly, which, in turn, is attached to the wheel.

Running the fork backward provides room to add a trailing arm similar to suspension on the rear wheel of a motorcycle. Hockemeyer notes that a similar action is also used in some tillage equipment, hinged in the front and floating free at the rear.

"The Terrain Tamer will fit the larger, often welded, mower deck, 60 in. and larger," says Hockemeyer. "Most of them have either a cast fork or a bent steel fork, and we cover the majority of them, regardless of brand. The Terrain Tamer may not work with legacy zero turns like a 2011 Gravely. However, it'll work with the vast majority of newer mowers."

The key factor to look for is if the fork is held in place with an M16 or 1/2-in. bolt. If either is true, the Terrain tamer will most likely fit.

Checking forks is important, adds Hockemeyer. "Two of the same model mowers can have different forks, due to



Davaus Terrain Tamer attaches to the front wheels of a ZTR to offer a more comfortable ride.

supply chain issues," he says.

The Terrain Tamer is in the final stage of development. Davaus plans to introduce it this coming September. It'll be priced at \$625 for a pair.

"We've tested the Terrain Tamer on a zero-turn Hustler for 3 years," says Hockemeyer. "In addition to a smoother ride, the increased travel up and down dramatically reduced the time spent on three wheels on ditch sides. We tested it on Deere zero-turns with similar results."

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Operator drives into the arms for an automatic auto-lock connection with no tools or pins required.

Front-End Loader Attaches In Seconds

By Bruce Derksen, Contributing Editor

The Westendorf Manufacturing Company of Onawa, Iowa, has made attaching and detaching tractor front-end loaders easier than ever with their unique Freedom Mount loaders.

The FM-550, the smallest in the Freedom Mount series, features a 98-in. tapered free-flow bucket with a lift height of 14 ft. Its hydraulic cylinders are "lineless" for improved visibility, and the equipment comes standard with rotational height and level indicators.

What sets the Freedom Mount loaders and buckets apart from competitors is the remote-control coupler and auto lock mounting system that allows the operator to remove or hook up loader attachments from the tractor cab.

"The loader flips over on itself to sit on the bucket," says Gail Cameron, Westendorf sales representative. "Just pull a handle and remove the exclusive Hydra-Snap manifold for hoses and electronics. They all unplug

at once instead of individually. Then slowly back the tractor away from the arms."

Hooking up the loader works in an opposite manner, with the operator driving into the arms for an automatic auto-lock connection. No stands, tools or pins are required.

Cameron says customers provide the make and model of their tractor, and Westendorf custom cuts bolt-on brackets.

The Freedom Mount loaders are manufactured in Onawa and shipped from numerous dealerships throughout the U.S.

"Customers order from their closest authorized Westendorf dealership, and we ship there. It's easy," Cameron says.

FM-550s come ready to work and sell for approximately \$25,000 plus S&H.

Contact: FARM SHOW Followup, Westendorf Manufacturing Co. Inc., 1900 Iowa Ave N., Onawa, Iowa 51040 (ph 877-423-0070; www.loaders.com).

They're Experts At Monitoring Grain Bins

Calian Agriculture has grain bin sensor systems that range from hand-held devices that read in-bin sensors to multi-bin sensing systems that monitor temperature and moisture and automate fan systems to optimize aeration.

"We started with Bin-Sense Direct that lets you use your smartphone to monitor moisture and temperature with in-bin cables," says Craig Stewart, Calian Agriculture. "Then we introduced Bin-Sense Live. It reported temperature and moisture levels via a cellular network to the bin operator."

Bin-Sense Live is powered by batteries or a solar panel. It sends hourly grain temperature and moisture readings via text or email alerts. It also offers proactive grain management, allowing the operator to control fans remotely.

Last year, Calian introduced Bin-Sense Solo. It transmits temperature and moisture levels daily from up to four sensing cables per bin.

"It's intended for use with one or two bins and is ideal for remote bins," says Stewart. "It can last up to 5 years on a single set of batteries or be powered by a solar panel. If you already have Bin-Sense Direct, you can upgrade by connecting the cables to Solo."

Calian's latest upgrade was launched a few months ago. Bin-Sense Plus, a multi-bin system, delivers hourly grain and ambient air temperature and moisture readings to the automation hub via remote units on individual bins in the system. It also offers automatic grain conditioning if bins are equipped with fan-ready remotes.

"Bin-Sense Plus automates fan systems for optimal grain quality and delivers grain



Bin-Sense Live is powered by batteries or a solar panel. It sends hourly grain temperature and moisture readings via text or email alerts.

storage information to your mobile or desktop device," says Stewart. "Users can set fan operation parameters and target outcomes on the Bin-Sense website and receive alerts via email and texts."

Calian offers three different subscription plans, including \$48 per year per Solo device. A Live master unit with up to 16 bins is \$375 per year. The annual subscription rate for Bin-Sense Plus is \$600 per year per hub.

Calian started in western Canada but is now marketed throughout North America as far south as Tennessee and Arkansas. The company also sells monitoring cables and a fan controller.

"Call us or talk to your local dealer to price the monitoring system that's right for you," says Stewart.

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