

Stand Makes Tractor Splitting Easier

Kenny Peters has made engine work easier for thousands of mechanics with his Twister Engine Stand (Vol. 33, No. 3). Now he's making splitting tractors easier with the Twister Splitter, a tractor splitting stand. It slips into place fast, easily adjusts to the needed height and fastens securely to a wide variety of bolt patterns. He hopes it's as well accepted as his engine stands.

"I built my first engine stand for myself around 15 or 16 years ago and started getting requests from others," recalls Peters, K&S Steel Products. "Over the years I think I've sold them to customers in every state but Alaska. Many customers have bought more than one, and lots of schools and engine shops have multiples. I have some in Canada and Europe, and interest builds every year."

Peters' splitter stand twists like his engine stand and is adjustable, fabricated with steel tubes that slide in and out of each other as needed. A stabilizing bar with small caster wheels extends perpendicular to each side of the stand, keeping it upright.

Universal mounting plates designed to match an infinite number of holes on a tractor frame are fixed to steel tube legs. The legs slide in and out of steel tube sleeves and can be raised up to 6 in. by replacing two bolts in each. Each leg sleeve can be removed by pulling a single bolt. The sleeve, in turn, slides over and is held in place on a short steel tube. It slides up and down the splitting stand's main frame as needed to match the tractor frame width. It, too, is bolted in place.

The splitter rolls easily on heavy-duty casters, even if the shop floor isn't completely clean. Rather than mounting them to the frame, Peters used another tube in tube mount between the wheel plate and the frame. This allowed him to fix bottle jacks over the wheels to provide another 6 in. of height if needed.

To slip the stand into place, a leg and, if needed, its sleeve can be removed. Once in place, the leg and sleeve are replaced, and the legs are adjusted for height.



Peters designed the splitter stand to work with tractors large and small by simply replacing the support legs. A short set works with smaller and utility tractors. A longer set fits bigger row crop tractors.

Once the universal mounts on the legs are bolted to the tractor frame, a spring-loaded pin makes it easy to swing the stabilizing bar out of the way under the stand.

"The adjustable legs make it easy to match the frame height before splitting," says Peters. "When it comes time to put the tractor back together, the jacks make it easy to adjust heights from side to side as needed."

Peters designed the splitter stand to work with tractors large and small, simply replacing the support legs. A short set works with smaller and utility tractors. A longer set fits bigger row crop tractors. The Twister Splitter tractor splitting stand with two sets of legs sells for \$1,240.

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Foot-Powered Trench Digger

The Blue Viper trenching tool lets you quickly dig a narrow trench across your yard without making a mess.

Ron Matson of Duluth, Minn., is the inventor of the Blue Viper. He came up with the idea after digging a 40-ft. trench from his house to an outbuilding using a regular shovel. Matson said it "tore up his lawn," and he wasn't happy about it.

"It's a narrow digger that's just 2 1/4-in. wide," he says. "It has sidewalls that are 3-in. high that will help you neatly dig a trench through your yard."

"It has a concave point that'll cut through roots without slipping off," Matson says. "An adjustable aluminum pin that runs through the sidewalls helps control the depth of your digging."

He says the tool can dig to depths of 4, 8, 12, or 16 in. The adjustable depth means it's also good for digging shallow post holes or putting tree seedlings in the yard.

The Blue Viper is American-made in Pine City, Minn. It's made of heavy-duty 14-ga. powder-coated steel. A foot bar at the end of the handle helps add some extra digging power.

"The Blue Viper carves out the soil without ripping it," Matson says. "It's almost like digging with a backhoe, where you have the leading edge and the two sides that dig an even trench."

"It's all one solid piece of metal," he says. "The blades can be sharpened if need be. If you hit a rock, run a grinder over the edges, and you're good to go."



Trenching tool digs a 2 1/4-in. trench at adjustable depths with minimal damage to lawns.

Once you dig the trench, take the pieces of sod and neatly put them right back into the trench. It will be hard to tell that any work has been done in the yard when the project gets finished.

You can find the Blue Viper at Lehman's. com for \$129, plus S&H.

FARM SHOW Followup, Ron Matson, Lehman's, 4779 Kidron Rd, Kidron, Ohio 44618 (ph 800-438-5346; info@lehman's.com; www.lehman's.com).



Each robot weighs less than 1,800 lbs. and can cover as much as 13 acres per day. It has a working width of just under 10 ft. and can be configured to place seeds in 4, 6 or 8 rows.

Solar-Powered Robot Seeds & Weeds

The FarmDroid FD20 can seed and weed a 40-acre field without burning a drop of fuel. The solar-powered robot runs off a base station that guarantees 1 cm accuracy once a field's geofence is set up. It records the location of each seed as it is planted and then returns to cultivate that exact location and the area around it, providing weed-free growth throughout the season.

The FD20 was developed by two Danish farming brothers tired of manually weeding organic sugar beets. The first prototype was brought to the field in 2012. They formed FarmDroid ApS in 2018 and sold their first units in 2020. The FD20 quickly began catching on with farmers across Europe and elsewhere.

"We have more than 250 FD20s in use in 18 countries," says Eddie Pedersen, FarmDroid ApS. "In addition to sugar beets, it's being used with onions, spinach, kale, rapeseed and different herbs. If we can seed it, we can weed it."

Row distance, plant distance, sowing depth, speed and tolerances can be adjusted to fit various crops, soil types and farmer preferences. If anything deviates from the preset tolerances, the FD20 automatically stops and alerts the farmer.

Each robot weighs less than 1,800 lbs. and can cover as much as 13 acres per day. It has a working width of just under 10 ft. and can be configured to place seeds in 4, 6 or 8 rows. It can be programmed to work in multiple fields and with multiple crops on up to 44 acres (20 hectares). All it needs to know is the perimeter of the field and any in-field obstacles.

Unlike most autonomous field equipment, the FD20 has no cameras, radar, lidar or other elaborate safety equipment. Instead, a simple trip wire stretches just beyond the perimeter of the FD20. With a top speed of a little over 1/2 mph, if anything hits the wire, the robot

stops within an inch or two.

"The farmer is alerted that it has stopped, requiring he go the field and manually restart it," says Pedersen. "It will also stop and alert the farmer if it reaches the geofence."

The four solar panels deliver up to 20 kWh per day. The battery pack is sized to provide 24-hr. operation for the electric-powered seeder/weeder. If it runs out of power at night, the FD20 simply stops where it is and waits for daylight to reenergize and continue operation.

The seeding units can do single or multiple in-line seed placements. An infrared sensor detects each seed drop and notifies the onboard computer if one is missed.

Camera-based systems have to see the plant to weed around it, giving early emerging weeds an advantage. Because the FD20 knows exactly where each seed is, it can do blind weeding before the seed emerges. Once the seed has emerged, it does inter-row and in-row weed removal.

An organic hemp seed producer in Saskatchewan reported impressive results after trying an FD20 in 2021. He used it on half a field, using his conventional equipment on the other half. The precision seeding reduced seed usage by almost 2/3 and increased yield by 280 percent.

"He was so impressed, he became a dealer and ordered three more FD20s," says Pedersen. "He will have four of them in his fields this spring."

More dealers are being established in the U.S. and Canada with the focus on value-added crops. The FD20 is priced at just under \$56,000. That does not include an RTK base station (which can handle up to six FD20s) or the 3-pt. mounted transport.

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