



David Johnson turned an old David Brown walk-behind tractor into this one-of-a-kind tomato transplanter. "It's a lot easier than hand planting," he says.

Walk-Behind Tractor Converted To Transplanter

When arthritis showed up in his knees, David Johnson started thinking about turning one of his David Brown walk-behind tractors into a transplanter.

"I set out 12 to 16 dozen tomato plants every spring, doing it like my dad," says Johnson. "He would do it by sticking the trowel in, making space, dropping the plant in, pulling the trowel out and stepping down the dirt. When my arthritis showed up, it became painful to do it that way."

Johnson had a lot to work with, given his family's love for walk-behind tractors. "My dad bought his first in 1954," says Johnson. "He always used 2 in the garden and started picking up used ones for parts."

It was a practice that Johnson continued. Today he has 27 of the little workhorses. Some are for parts and others for chores, including 5 set up with various types of cultivators. Setting up one as a transplanter just made sense. The challenge was slowing down the ground speed.

"I knew I needed to make it super slow," says Johnson. "I bought a slow speed pulley, but at 3/4 mile per hour, it was still too fast."

Johnson's solution was to install the hydraulic drive from a log splitter and an 8 hp. Tecumseh engine into a tractor frame. He mounted the pump, reservoir and valve and plumbed them to run through a slow-speed, hydraulic motor with the valve set at the detent position.

"The David Brown has a hand-operated clutch that allows it to free wheel when stopped," says Johnson. "With the motor belted to the clutch pulley, I could start and stop as needed."

Aside from the used log splitter, the only parts Johnson had to buy were an air filter for the Tecumseh and an opener for the transplanter.

"I ordered an irrigation shovel from Northwest Manufacturing to use as a planter

shovel," says Johnson. "I built a framework out of salvaged 1 1/4 by 1/2-in. steel and attached it to the chassis. I mounted the 7-in. shovel to a vertical shaft on the frame."

He attached a length of 3-in. pvc pipe to the vertical shaft, modifying it with a 3 to 3-in. adapter at the top for a funnel when dropping in seedlings. At the bottom of the pvc, he cut away about 2/3 of the last 6 in. of the pipe with the remaining third facing forward toward the shovel.

"The cut away lets the seedlings stay upright when dropped into the furrow," explains Johnson.

To close the furrow over the seedling roots, Johnson used an old Troy-Bilt hiller, shaped like a V-plow. He split it in two and mounted opposing pieces behind the pvc pipe to push dirt in, instead of out.

A set of lawn mower wheels are mounted to the framework as press wheels. At the very rear of the transplanter frame is a set of gauge wheels, with hand levers for height adjustment, from an old David Brown cultivator. Johnson swapped out 14-in. cutting discs for worn out 10-in. wheels.

"The larger discs let me raise the frame to get the planter shovel off the ground when going between the garden and the garage," he says.

To finish off the transplanter, Johnson mounted a seedling tray stand to the right of the pvc tube.

"When I see the right distance between the pvc tube and the last seedling, I stop the transplanter, drop a seedling and move on," says Johnson. "It is a lot easier than doing it at ground level, and I don't think I have more than \$450 in it."

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Bed-Mounted Bale Stabber

"We stack our round bales in rows and use a parallel squeeze bale bed, mounted on a flatbed truck, to pick up the bales and feed them to our cattle. The bale bed comes with a pair of steel arms fitted with metal spinners that grab both ends of the bale," says Matthew Hempel, Eldridge, Mo.

"However, sometimes the bales are placed so close together that there isn't room to grab the bale. To solve the problem, I attached a 39-in. long bale spear to one of the arms. I cut a hole in the spinner's mounting bracket and inserted the spear through it, then welded on a block of steel to reinforce the spear. It works great to stab the bale, and eliminates the need for a tractor."

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Hempel attached a 39-in. bale spear to one of the arms on truck's parallel squeeze bale bed, allowing him to stab bales placed close together in rows.

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"Furrow Brow" Blades Clean Planter Gauge Wheels

Perfect planting depth, even when conditions aren't perfect. That's what Furrow Brow, LLC, says you can expect with its Furrow Brow blade that's designed to reduce build-up on planter depth gauge wheels.

The Furrow Brow blade mounts directly to the gauge wheel arm bolt. However, the blade doesn't touch the gauge wheel tire, and doesn't travel with the wheel. Instead, each time the planter is raised, the movement of the tire down and to the rear dislodges any mud or debris that has accumulated behind the blade, so that you start with a clean blade on the next planter pass. And because the blade is perpendicular to the wheel, there's little chance of material "hairpinning" over the blade and stopping the wheel, says the company.

Bolt tension keeps the brow from turning on the bolt when it encounters mud or debris.

Units are available for most Deere and



Blade mounts directly to gauge wheel arm bolt without touching tire. As planter is raised, downward tire movement dislodges any mud behind blade.

Kinze planters.

Contact: FARM SHOW Followup, Furrow Brow, LLC (ph 712 250-4658; www.furrowbrow.com).



Rob Dolinski used a ground-driven drop spreader and a 5 1/2 hp. gas engine to build this belt-driven slit seeder.

Shop-Built Slit Seeder

Slit seeders do a great job of overseeding damaged lawns, but Rob Dolinski didn't like paying the rental cost that can run \$50 or more for half a day.

"The idea popped into my head to build one rather than rent," says Dolinski. "I have a small acreage, and the annual rental cost was adding up."

He knew that grass seed has a higher germination rate and success rate with slit seeding and thought a slit seeder would be a worthwhile piece of equipment to have on a permanent basis. With new ones running in the \$4,000 to \$5,000 range, he couldn't justify buying one.

Looking through his salvage pile, he realized he had most of what he needed. The 2 components missing were a drop spreader and an engine. "I also had to buy a new drive belt and a pulley," he adds.

Dolinski quickly found a used, 22-in., ground drive, lawn spreader online and bought a 5 1/2 hp. PowerFist gas engine from Princess Auto. The outlet also served as his prime source for any other needed parts.

Dolinski built a rigid frame using angle iron and flat metal he had on hand. He mounted the drop spreader in front and the engine on top of an OSB platform. He also mounted OSB panel in front of and behind the knives.

Rear wheels were salvaged from a hand cart, while smaller wheels left over from another project were tucked in behind the hopper.

Mounting the knives to turn the soil was the biggest challenge Dolinski faced. Here he had two options. He could weld the blades to a driveshaft, or center drill a hole and secure them to the driveshaft with nuts.

He went with the latter, with the idea of being able to replace one should it get damaged. In retrospect, he thinks welding



Seeder's 6-in. long blades were cut out of 2-in. wide flat bar, and are spaced 2 in. apart on a threaded rod.

would have been simpler and just as easy to repair.

Dolinski cut eleven, 6-in. long blades out of 2-in. wide, 1/8-in. thick flat bar. To ensure a uniform mounting hole, he drilled through all 12 blades in a single action and cut a leading edge with a grinder.

He used 3/4-in. threaded rod and nuts to sandwich the blades 2 in. apart on the rod.

He didn't give much concern to balancing the blades on the shaft, simply mounting the rod under the frame with pillow block bearings.

Dolinski has used the slit seeder for about 4 years. He estimates the total cost at about \$400. He has more than recovered the investment in avoided rental fees and an improved lawn. He has also built up some community ties by loaning his slit seeder to neighbors.

A veteran project builder, Dolinski has also gained some cross-Canada attention. His slit seeder is one of a select group of projects posted to the Princess Auto Project Showcase.

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