



"I built it because I wanted a soil plane that was built heavier and more flexible than what I could buy," says Don Heintz about his 3-way soil plane.



He can tilt the blade up and down and left or right, thanks to a unique mount that uses an old sheep's foot roller tongue and bushings.

He Built His Own Rock-Tough, 3-Way Soil Plane

By Jim Ruen, Contributing Editor

When I need dirt moved, I call my 76-year old neighbor Don Heintz. With more than a half century of experience in earth moving, he can make his skid steer dance while his self-designed soil plane does tricks.

"I wanted a soil plane that was heavier and more flexible than what I could buy," recalls Heintz.

Heintz can tilt the blade up and down and left or right thanks to a unique mount that uses an old sheep's foot roller tongue and bushings.

With the help of a local mechanic and fabricator Heintz brought his design to life, learning as he went. He started with 3/8-in. thick steel for quick-tach base plate. The 90 by 90-in. soil plane frame and cross arms were fabricated with 1/4-in. steel plate.

The heavy-duty bushings were welded

to the frame. The flange on one end of the tongue - a large steel pipe that rotates inside the bushings - was welded to the quick-tach plate with steel gussets reinforcing it. A hydraulic cylinder attached to the tongue between the bushings and the frame produces the left-to-right tilt.

Heintz quickly discovered the torque on the plate was too great. "It snapped the welds," he says. "We replaced the plate with 5/8-in. steel and that held. We also used 5/8-in. steel to reinforce the front arms of the plane."

The arms needed the reinforcement. The first crossbar sets back about a foot, leaving the arms outstretched and serving multiple purposes.

"I use them when I push over trees with the soil plane," says Heintz. "I also use the arms



Soil plane's frame and cross arms were fabricated with 1/4-in. thick steel plate.

to slice dirt off a bank as I work alongside it."

When his son and grandson redid a waterway for me recently, it was the elder Heintz who swooped in with his skid steer and earth plane to do the final finishing work. In no time at all, he had finished off

the waterway as smooth as silk and ready for seeding.

As my neighbors often remark, "What will we do when Don Heintz really does retire?"

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A 2-wheeled, triangle-shaped attachment makes Timothy Hoopman's 3-pt. mounted blade work more like a road grader.

3-Pt. Blade Works Like A Mini Road Grader

One problem with using a conventional 3-pt. mounted blade is that it can be difficult to control depth. For example, if the tractor's front wheels go over a bump the blade will dive into the ground. If the wheels drop into a hole, the blade will lift and accidentally dump its load.

Timothy Hoopman of River Falls, Wis., solved the problem by coming up with a 2-wheeled, triangle-shaped attachment that makes his 3-pt. mounted blade work more like a road grader. He pulls the 6-ft. blade behind his Massey Ferguson 1020 compact tractor.

"I use it to level my driveway and for general landscaping work," says Hoopman.

First he replaced the tractor's standard 3-pt. top link with a hinged top link. This link becomes slack and nonfunctional while the blade is in contact with the ground, allowing the blade to float. When the hitch is lifted, the top link becomes taut and lifts the blade.

The attachment includes a pair of 10-in. dia. caster wheels attached to a 4-ft. length of 5-in. channel iron that pins on back of the blade's frame. A tubular metal arm pins onto the top of the channel iron and runs diagonally up to a pin that Hoopman added to the top back side of the blade's 3-pt. mounting bracket. It forms a rigid triangular structure that carries some of the blade's weight.

The tractor's lift arms also carry some of the blade's weight and set the depth of cut. The attachment's wheels carry the rest of the blade's weight because the top link is slack.

"It works on the same principle as a road grader," says Hoopman. "Road graders keep the surface smooth because their blade is located about half way between the machine's front and rear wheels. This reduces how much the blade goes up or down as the wheels go over rough terrain."

The length of the attachment's top arm is adjustable, similar to a top link. When the blade is positioned diagonally, the length of the top arm will determine if the leading or trailing end of the blade digs deeper.

The attachment can be pinned in a raised position to allow full 360 degree rotation of the blade, and for storage. He can remove the attachment for storage by removing 2 pins - one from the channel iron arm where it attaches to the blade's frame, and the other from near the top of the 3-pt.

"I think this same design would also work on a bigger blade and tractor," notes Hoopman.

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Landon Becker says his new stock trailer panel holder will securely hold up to 4 cattle panels on the side of any livestock trailer.

Stock Trailer Panel Holders

Hauling cattle panels on the side of a livestock trailer isn't a new idea, but this might be the first commercial product that does the job in a safe and secure way, says Landon Becker of Tonasket, Wash. He recently sent FARM SHOW photos of his new stock trailer panel holders that securely hold up to 4 cattle panels on the side of any livestock trailer.

The panel holders are designed to accept up to 2-in. O.D. panel tubing and come with all the necessary mounting hardware.

"Until now I've been selling these panel holders locally by word of mouth and by email," says Becker. "As far as I know there's nothing on the market like them. My brother-in-law came up with the idea because he needed a better way to haul 4 panels to a distant pasture."

"Until now farmers have either a hired local fabrication shop to build panel mounting brackets, or built their own. However, there has been no way to space panels off the trailer so they don't bang around and beat up the trailer as you're going down the road. The lower panel mounting brackets in my kit keep your panels from lifting up and from moving either forward or backward."

The kit includes a pair of upper brackets that U-bolt to vertical posts on the trailer. Each bracket has a series of V-shaped saddles that support the panel's top tube.

The lower panel mounts use a pair of nylon



Panel holders kit consists of upper and lower mounting brackets that space panels off the trailer so they don't bang

cam straps to keep the bottom of the panels secure. The top of the strap attaches to a small C-shaped bracket that screws onto the trailer, while the bottom hooks into a small D-ring attached to the trailer. The operator pulls down on the straps to tighten them.

"All the brackets come with a powder coated finish so they should hold up for a long time," says Becker.

A complete set of panel holders sells for \$239 plus S&H.

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