



Homemade and handy, this 2-wheeled cart carries 1,000 gal. of liquid fertilizer while carrying an 8-row planter on a 3-pt. hitch.

Liquid Fertilizer Tank And Planter Cart

Instead of spending several thousand dollars to buy an 8-row planter with liquid fertilizer tanks, Mike Peterson built a tank and planter cart from the ground up in his own shop. The home-built rig carries a 1,000-gal. liquid tank on the main frame while a Deere 3-pt. mounted, 8-row Max Emerge planter mounts on back. Peterson says the setup worked like a charm on more than 1,000 acres last spring.

The cart is 9 ft. 6 in. long and 5 ft. 6 in. wide, built with 4 by 6 by 1/2-in. box steel. A 4 by 8-in. by 15-ft. hitch extends under the cart to provide uniform support for the liquid tank and mounting points for the 3-pt. hitch. Lift arms on the 3-pt. are 2 by 5 by 1-in. thick bars that are 46 in. long. Two 4 1/2-in. cylinders raise and lower the planter bar.

The liquid tank sits in a cradle made of 2 1/2 by 8 1/2-in. box steel. An operator can easily fill the tank from ground level through a valve at the front of the cart. A grate platform on front of the cart is ideal for carrying extra fertilizer supplements or for allowing the operator to check inside the tank. Fertilizer is applied with a hydraulic pump.

For good flotation with minimum compaction, the cart rides on huge 18.4 by 26-in. turf



Mike Peterson fashioned the rugged 3-pt. hitch on back of the fertilizer cart. Two cylinders raise and lower the bar.

tires. It hooks to the tractor with a 1-in. thick hitch that's 4 in. wide and 12 in. long. Five holes allow vertical adjustment and leveling for different drawbar heights.

"We can plant up to 60 acres without refilling the liquid tank or the seed boxes," says Peterson, "which gives us a lot of capacity. The cart is easy to pull, easy to maneuver, and easy to plant with," he adds.

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Harlen Grovom's "air cycle" gets a lot of chuckles at parades. The rider is pushed along by a 30-in. propeller belt-driven by a 7 hp Wisconsin air-cooled engine.

Air Cycle Becoming A Parade Favorite

Fifty years ago, Harlen Grovom started to make a small snow plane but then stopped when he got busy farming, and forgot all about it until recently when he pulled out the parts and decided to make an "air cycle" out of them instead.

He had hung onto the 30-in. propeller he bought back then for \$3 out of Popular Science magazine. Last year he mounted the propeller, a steel dump rake seat, and two motorcycle wheels on a frame, with a single bicycle wheel on front.

"The propeller is belt-driven by a 7 hp Wisconsin air-cooled engine, taken from an old grain elevator," he says. "It'll push you

along at 20 to 25 miles per hour - faster if you're light. There's a throttle and brakes to slow you down. The frame is made out of conduit pipe. I have a cage around the propeller to make it safer."

Grovom says he drove the air cycle in the 4th of July parade last year in Park River, and got a great response.

"It was very unique and popular - everybody was taking pictures and waving."

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Self-propelled twin tandem Kuhn rake was built out of a Deere 3830 swather.

Swather-Rake Windrows Field Fast

Chuck Palmer rakes 20 acres per hour with his self-propelled twin tandem Kuhn rake. The adjustable rake lets him clear a 12 or 16-ft. swath, depending on how he sets the rake and whether he uses one or both sides.

"I bought it from Dave Holt, a local farmer who has since passed away," says Palmer. "His uncle used to call him the Thomas Edison of farm machinery. He could do most anything. When a dealer wouldn't give him anything for his Deere 3830 swather on trade, he decided to make a self-propelled rake with it."

Holt dropped the header and welded a clevis hitch to the center of the front cross frame on the swather. He then modified an old Kuhn twin tandem rake to be pushed instead of trailing. Holt swapped the tandem units to opposing sides and replaced the 2-pt. hitch with a bar that connects with the swather at the new clevis.

Pushing the rake required stabilizing the bar against the swather. To accomplish this, Holt welded and bolted a piece of 4 by 5-in. channel iron centered on and perpendicular to the 3 1/2 by 6 1/2-in. tubular steel tow bar. Eyebolts were fastened to either end of the cross bar and connected in turn to the upper arms that previously supported the header frame.

The cross bar was also anchored to the swather from its underside. At either end of the cross bar, a short section of 4 by 4-in. tubular steel was welded in place. Welded to the bottom of the 4 by 4 pieces are short pieces of 2 by 6-in. channel iron, which in turn rests on what were the lower support

arms for the header.

Holt found out that these five points of connection were not enough to push the rake, especially on turns. "The torque was too great," says Palmer. "Holt attached steel cables to the ends of the cross bar and angled them back about 3 to 4 ft. to the hitch bar, just ahead of the gear box on the rake for added support."

Palmer found that even the cables couldn't handle the strain. When one of them snapped he had a local metal fabricator weld 6-ft. long 2 by 6-in. channel iron from the ends of the cross bar to the tow bar. The steel A-frame handles the torque fine.

Getting power to the pto driven rake heads was handled by mounting a sprocket to the swather header drive. A no. 60 chain connects it to a second drive sprocket with a splined pto stub in line with the rake pto shaft mounted below the tow bar.

"The rake goes into gear just like the header used to, using the same controls," explains Palmer.

Holt mounted a caster wheel at the end of the new hitch bar and uses the header lift hydraulic hoses, activated by the header lift pedal in the cab, to power the rake lift cylinders. Road transit is a snap with the two rakes lifted into vertical position. Palmer reports he can travel at about 15 mph between fields.

"It works great," he says. "It takes the place of a tractor and a couple of rakes."

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Add-On Foot "Pusher" Makes Digging Easier

You can do a lot more work with less foot pain using the new "Dig Rig" from inventor Fred Churchman, Baton Rouge, La.

The molded plastic attachment fits over the top of the shovel. It measures 8 1/2 in. wide and has a 3 1/4-in. wide lip, so instead of stepping down on the shovel blade's narrow ledge you're stepping down on a much bigger area.

"It reduces stress on your foot, ankle, leg and back and also provides more leverage for digging," says Churchman.

The unit simply clamps onto the spade's handle, just above the shovel using a pair of self-locking, automotive-type hose clamps.

Churchman says the unit will be on the market soon but will be sold only through big discount stores. It will sell for less than \$8.

Contact: FARM SHOW Followup, Fred Churchman, 451 Maxine Dr., Baton Rouge, La. 70808 (ph or fax 225 766-6431) or Robert Ginges, PMD Mold & Die, 4140 Helton Drive, P.O. Box 2910, Florence, Ala. 35630 (ph 256 764-0402).



Molded plastic attachment fits over top edge of shovel. It has a 3 1/4-in. wide lip, so you step down on a much bigger area.