



Don Bot and son Chad use a salvaged fertilizer cart to supply their home-built, 18-row strip tiller equipped with an airflow distribution tower.



Side-dress applicator with airflow boom and distribution system is mounted on front of a salvaged fertilizer spreader box.

Repurposed Spreader Boxes Save Money, Make Money

Don Bot and his son Chad are putting salvaged fertilizer spreader boxes to good use as heavy-duty fertilizer carts. Once mounted to a truck chassis, the multi-compartment fertilizer boxes with airflow distribution booms are often scrapped out. The used truck chassis find new uses as lime spreaders or large manure spreaders.

"We found a salvage dealer in Iowa with several airflow boxes for sale," says Bot. "There was some corrosion and deterioration. However, there is a lot of stainless steel in the components, so they were all still in functioning condition."

The Bots used 24-in. I-beams salvaged by a bridge contractor to build frames to match the box mounts. Wheels and axles came from salvage yard combines.

"I tend to over-engineer projects like this," says Bot.

Over-engineering was a good thing,

especially for the fertilizer cart intended to supply Bot's homemade, 18-row, 22-in. row strip-tiller. Designed around a Deere chisel frame with an extended rear frame, the strip-tiller was heavy-duty enough for Bot to mount the distribution tower from the airflow system on it. The strip-tiller hooks onto its rear. The cart's 4 bins hold nitrogen, phosphorous, potassium and sulfur. Two micronutrient boxes previously mounted inside the box were remounted to its rear. Two more micronutrient boxes from the salvage yard were also mounted to the cart's rear. They hold zinc, copper, manganese and boron.

"We can control the individual flow of macro and micronutrients for variable rate fertilization," says Bot.

An auger from the rear of the cart moves fertilizer to the distribution tower. From there, the nutrients are distributed to individual

outlets at each strip.

The second cart was modified for use as a side-dress applicator. The airflow boom and distribution system were mounted on the front of the box. Drop hoses over every other row are equipped with Y-shaped tips that spread the fertilizer over the rows.

"Both fertilizer systems are hydraulically powered," explains Bot. "The large tractor used on the strip-tiller can handle the load, but I wanted to use a smaller tractor with narrow wheels on the side-dress cart. We had to add a pto-powered hydraulic pump to power the air flow system."

Bot credits the carts with giving him and his son increased flexibility and control of their inputs. To further control costs, they buy their fertilizer in bulk, storing it in a refurbished hog barn. They have also fabricated their own planter using a new toolbar with older planter units. They also added a used tender truck for

bulk seed and fertilizer.

"We have roughly \$100,000 in our field equipment and another \$25,000 in tender, fertilizer loader and building maintenance," says Bot.

His added software and controllers bring the cost of his strip-till system to about \$150,000. He credits strip-till for increased yields and bulk fertilizer buys with reduced costs. He figures the yearly advantage of the system is about \$93,000 on 600 acres of corn and soybeans, not to mention using the equipment to fertilize another 300 acres of wheat. In addition, the equipment is also used on his son Chad's land.

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John Houston converted an old Woods zero-turn riding mower into this powered wheelbarrow. "Works well for dumping concrete," he says.

Wheelbarrow Powered By Zero-Turn Mower

Pushing a loaded wheelbarrow around is hard work, especially when you're using it to haul wet concrete mix. John Houston says his self-propelled wheelbarrow, made out of an old zero-turn riding mower, does most of the work for him. It even dumps its load automatically.

"I built it to use with my concrete mixer, but it can also be used for many other jobs," says Houston. "The wheelbarrow extends about 4 ft. in front of the mower. I drive the wheelbarrow under the concrete mixer's spout and load it up, then drive to the site of the building foundation and dump it. It has no trouble moving 300-lb. loads unless the ground is real muddy."

He bought the used Woods zero-turn mower on Craigslist for \$800. He removed the deck and the pto shaft that belt-drives the blades. He removed the wheelbarrow's handlebars and built a metal support frame that attaches to the wheelbarrow's axle and also to a rectangular steel frame that attaches to the mower.

"I left a couple of stub shafts on front of the mower and welded a length of 1-in.



He stripped down the mower, then built a pivot point on front that allows wheelbarrow to float up or down.

dia. tubing onto them. The tubing serves as a pivot point for the frame, allowing the wheelbarrow to float up or down on uneven ground," explains Houston.

The wheelbarrow is raised or lowered by a 12-volt DC actuator rated at 2,000 lbs. It operates off the mower's battery and is activated by pressing a switch on the mower.

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Allen Hernke uses his zero-turn riding mower to push a modified wheelbarrow. He replaced wheelbarrow's front wheel with an axle and two 15-in. wheels.

Wheelbarrow Mounted To Mower

"Last summer I dreamt that I was pushing a wheelbarrow with my zero-turn riding mower, moving dirt from one place to another. The dream was so vivid that I scribbled down some plans and started building it the next day," says Allen Hernke, Cannon Falls, Minn.

He started by removing the front wheel from an old Century 4-cu. ft. wheelbarrow and replacing it with two small wheels about the size of those on his zero-turn mower. Two carriage bolts through the floor of the hopper held the axle in place. To pull or push the rig, he made a 5-ft. long hitch out of 2 by 2-in. tube steel. One end attaches to the axle under the hopper and the other attaches to a 1 5/8-in. ball on the mower. That ball is mounted on a piece of 1 1/2-in. tube steel secured with bolt clamps to the frame of his Toro lawn mower.

"The mower pushed or pulled the wheelbarrow just fine when it was empty, but

full of dirt it tipped over real easy," Hernke says. "I fixed that by removing those small wheels and replacing them with two 15-in. wheels from an old corn elevator. Now the hopper rides quite a bit higher and it doesn't tip at all."

One person dumps the wheelbarrow by lifting on the handles after removing a pin on the C bracket that straddles the hitch.

"The Barrow Buggy sure makes dirt moving a lot easier than pushing a full load by hand," says Hernke. "We used it last summer to raise and level about 200 gravestones at our church's cemetery. Before I made this rig we used a skid steer, but that left tracks between the monuments. We don't have that problem with this because it's a lot smaller, but just as handy."

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