



“We spent less than \$4,000 to build a sprayer that’s as good as one you’d pay \$30,000 to buy,” say Bill and Rusty Olson about their pull-type sprayer.

Home-Built Sprayer Compares To \$30,000 Factory Model

It may look like an expensive factory-built sprayer, but Bill and Rusty Olson’s pull-type sprayer was actually put together in their farm shop.

The father-son farming team decided to build a new sprayer more than a year ago, but it took awhile for them to pull together all the necessary components. Rusty says he and his father looked at several sprayers owned by their neighbors and at farm shows and picked out the good points on each. They then incorporated those into their design.

For a frame, they took channel iron from a couple of old anhydrous toolbars. “We added additional channel iron and steel tubing to come up with a frame that is about 5 1/2 ft. wide and 22 ft. long, including the tongue,” the elder Olson says.

They fitted the frame with an axle made of heavy I-beam reinforced with steel plate to make it stronger. Then they added 10-bolt hubs salvaged from a semi-truck tractor that had burned. “We took out the axles and welded the holes shut, so we have oil bath hubs,” he says.

The 10-bolt hubs were necessary to match up with wheels and 14.9 by 46 tires taken from an old Ro-Gator. The wheels are spaced 10 ft. on center.

The Olsons located a 1,600-gal. stainless steel tank that had been taken off a junked TerraGator. It came with a second fresh water tank mounted above the sprayer tank for flushing the system.

For a boom, they found a Bloomhart hydraulically leveled 80-ft. boom that someone had wrapped around a pole and scrapped. “We straightened it and now it’s just fine,” Olson tells.

To hold the boom, they added a hydraulic parallelogram lift, constructed from the wings of an old Wil-Rich cultivator.

“Mounted on the parallelogram lift, the boom can operate anywhere from 3 1/2 ft.

off the ground up to 6 ft.”

The lift is designed so the boom can be removed with four bolts if a different tool bar or boom is needed.

They plumbed the hydraulics on the lift using 1/2-in. steel pipe to reduce the number of hoses on the machine. While the leveling and lift is hydraulic, the boom must still be folded manually. “We’re working on folding it hydraulically, though,” says Bill.

They traded their Raven 440 controller for a Raven 450 that allows them to control the boom in six different sections. The 450 controller does not have a serial port for GPS. However this fall Rusty purchased a Cultiva Light Bar Guidance System with mapping capabilities, which they also use for fertilizer and nitrogen application throughout the year.

They used the pto-powered pump from their old 60-ft. tank sprayer, which they also built in their shop. They’d like to replace it with a hydraulic pump eventually.

At a salvage yard in Mason City, they ran across an old 2-door steel office cabinet. It’s 4 by 4 ft., and was just the right size to hold all the sprayer controls, to keep them out of the weather. It’s mounted on the side of the trailer in front of the tank.

When it was finished, they added a coat of industrial tractor yellow paint.

The Olsons used their new sprayer to apply post-emergence herbicides in corn and soybeans, and again later in the season to apply aphid control in tall soybeans.

“We spent under \$4,000 to build a sprayer that’s as good as one you’d pay \$30,000 to buy,” says Bill.

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Dairymen use big tire strips to resurface areas next to the cement pads outside their barns. Rubber walkways are also used outdoors to line rotational grazing alleys.

They Pave Walkways With Big Radial Tires

Several years ago, Leiden Land and Cattle Company Inc., of Coalport, Penn., started recycling big industrial tires for their cow-calf operation. They’ve used them to line their rotational grazing alleys. The idea worked so well, they recently began producing them for sale.

The rubber walkways keep cows out of the mud so they stay cleaner, and they provide a cushion as they walk.

“We use large, smooth radial tires from earthmovers, rock trucks, payloaders and scrapers,” says Chris Leiden. “It’s hard to find bias ply tires anymore and the drawback is that the radials are extremely hard to cut. We have equipment that we built for this purpose. We cut out the side walls and then cut the tread in half so it lays out flat.”

The flat strips of rubber are popular for resurfacing alleyways in intensive grazing pastures as an alternative to permanent options like Geotextile (fabric material, with crushed stone over top) or soil cement.

“What you do is, take the topsoil off to the thickness of the treads, and then lay them down,” Leiden says. “They’re generally heavy enough to stay in place on their own. It’s a softer surface for the cows to walk on and rainwater can still drain off between the treads. They create a solid surface and the cows are never going to wear away three to

six inches of rubber. Another benefit is that our system isn’t permanent. If you decide you want to change your alleyways, you just pick them up and move them.”

Dairymen have also used the big tire strips to resurface areas next to the cement pads outside their barns, or anywhere else that cows congregate and otherwise tend to create mud holes.

Dairyman Arden Landis placed 100 feet of treads in the laneway prior to the cement holding yard which leads to his milking parlor.

“I’ve found that they leave the mud and the stones outside on the treads. When it rains, the treads just wash off,” says Landis. “I virtually have no mud, grit or stones on my cement holding yard floor. It makes it easier to keep the parlor cleaner and the cows aren’t as dirty either.”

Leiden has treads available in sizes ranging from 20 in. wide and 16 ft. long, to 24 in. wide and 30 ft. long. The family sells them for \$2.50 per square foot. For example, a 2 by 16-ft. tread costs \$80, and a 2 by 25-ft. tread is \$125. Shipping is extra.

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Sprayer is equipped with a 1,600-gal. tank and 80-ft. boom. “It works great for applying post-emergence herbicides in corn and beans,” says Olson.



To hold the boom, they added a hydraulic parallel linkage constructed from the wings of an old Wil-Rich cultivator.