

# He Makes Custom, Motorized Garden Carts

Clint Evans builds motorized garden carts designed to meet customer needs, whether hauling construction tools, garden goods or horse manure. The one constant is the basic design. Aside from the paint and a few bolts, they are built from repurposed materials, starting with stripped-down Murray lawn tractors.

"The old Murray rider has one of the best hydrostatic transmissions I've seen," says Evans. "It's super durable, really basic with a single drive belt, and the Murray has a good chassis."

The chassis, four wheels and the transmission are about all that's left of the Murray when Evans is done. Power is provided by a push mower engine that he mounts above the old front end with the rope pull facing the operator.

"The lawn tractors have a bigger engine than the cart needs," says Evans. "The engine, battery and gas tank all take up space. A 5 to 7-hp. engine from a push mower is big enough, is compact and uses very little fuel."

Evans built the first cart for his own use around his small engine shop. It satisfied his needs and soon attracted interest from customers who saw it. It was narrow and versatile, and the operator didn't have to



Motorized carts made from old lawn tractors with push mower engines.

climb down from a seat to load or unload.

"I wanted to be able to walk alongside and control it," says Evans. "I always liked old-style tractors with hand clutches, so I used similar levers to control the cart. It's like driving a forklift with the load ahead of you."

One lever is tied into the steering for tiller steering. A second is connected to the hydrostatic transmission to control forward, reverse and speed.

"With the hydrostatic, you can move as slow as you want or as fast as a jog," says Evans. "One customer needed to carry hand tools across a university campus. I added a

seat over the engine and geared it up, so you would have to run to keep up. He was able to drive it into the building and right into the classroom."

Once the engine and controls are in place, the rest of the design is up to the customer. Evans modified the chassis frame to carry a bed, one that tilts if desired. Here too, simplicity reigns. The steering lever serves double duty. Pull a pin and it becomes a lever for tilting the bed. Slide it into a pipe on the side of the bed and lift.

The base price for a cart starts at around \$700 and can run to \$1,000, depending on extras. "I had one guy who wanted a bed that could hold three to four wheelbarrows full of material," recalls Evans. "I set it up so he could open the end gate, letting material run out a chute. When enough was gone, he could lift it up to dump the rest."

"Most of my customers like the narrow profile," he says. "A landscaper needed to carry root ball trees through 40-in. garden fence gates to plant in backyards. I added a brace at the back of the bed to help support the tree and used expanded metal for the bed."

Another customer needed to carry tools, including an air compressor, nail guns and saws into a multi-story building. It took five



Clint Evans makes custom, motorized carts from old Murray lawn tractors.

employees an hour in the morning and one in the evening just hauling tools.

"I built a special rack for the tools, and he was able to drive it off his truck and into a freight elevator with all the tools," says Evans. "At night he drove it out and back to the truck. He got his return on the cost in just five days."

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## Self-Guided, Precision Robotic Weeder

The Photoheylar from Planungsburo Heinrich offers camera-guided, precision in-row weeding. It was developed by the German company for use in high-value, organic sugar beets.

The Photoheylar's precision is ensured by sensor wheels steered using hydraulic cylinders. The tractor-mounted system is synchronized with the tractor wheels automatically. It detects rows and adjusts accordingly.

The rotor design clips weeds in row and deposits them in row centers. Each rotor is powered by its own hydraulic motor.

Trailing cultivator hoes uproot or bury the deposited weeds. The rotor is designed to always cut at an angle of 90 degrees to the row, even on a slope.

Precision weeding does require

precision seeding of the crop. The company recommends exact seed placement in a delta configuration over the width of the machine. A Kverneland Unicorn with Geoseed Level 1 or a comparable system is suggested.

While the Photoheylar was designed to meet the challenge of sugar beet weeding, co-founder Stefan Heinrich says it's equally applicable to other high-value crops. All that is required is to adjust the inter-row width and the width of the tools.

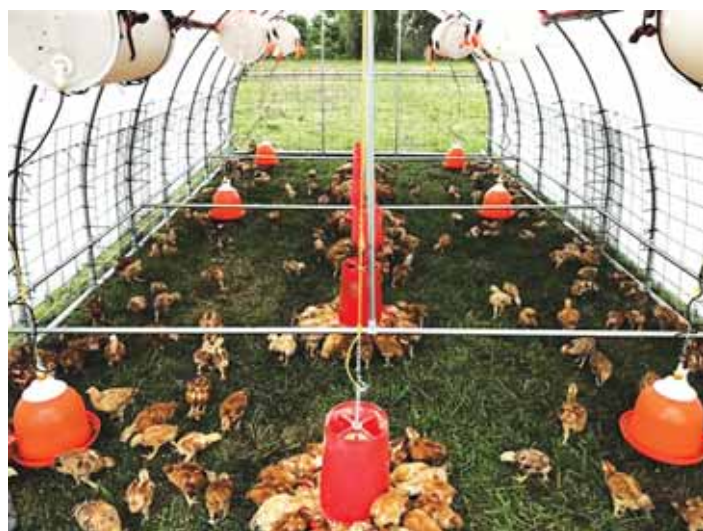
The Photoheylar does not currently have a North American distributor. However, machines can be ordered direct from the company, according to Heinrich. It has a starting price of about \$143,000. Additional details are limited as the company website is only available in German.

Contact: FARM SHOW Followup,



The tractor-mounted system is synchronized with the tractor wheels automatically. It detects rows and adjusts accordingly.

Planungsburo Heinrich, Münchshöfener Straße 15, 94363 Oberschneiding, Germany (ph 011 49 176 64165644; info@photoheylar.de; www.photoheylar.de).



The MRC was assembled without welding, using only chain link fencing material and adapters such as purlins, pipe ending straps, and self-tapping screws sourced online.

## "Made-It-Myself" Mobile Coop

Charlie Harrold, owner of Charley's Chicks, has a backyard chicken farm where he raises about 50 different breeds of birds for the North Florida region. He designed and built an open floor mobile range coop (MRC) to

withstand Florida's weather and provide his birds with 24-hour access to pasture.

Harrold built his 12 by 24-ft. MRC with 2 3/8-in. pipe attached with interior sleeves and bolted together for skids and corner braces.

He cut 16-in. pieces of the 2 3/8-in. pipe in half lengthwise to create a "pressure" fitting squeezed inside the skids. The base was drilled out for 1/2-in. bolts to hold everything together.

Hoops for the roof were standard 1 3/8-in. chain link fencing pipe and 12-in. long sections of 1 5/8-in. dia. pipe were used as adapters to connect the roof to the skids with end rail clamps.

Harrold purchased greenhouse-style pipe benders from Colorado Metal Worx (coloradometalworx.com; ph 719-766-6017) to bend the roof pipes himself. He built a "buck" on a 4 by 8-ft. plywood with a 2 by 4-in. frame. Using large 10 to 12-in. C-clamps, he fastened the pipe bender to the buck and bent the pipes uniformly.

A hydraulic press was used to put a 20-degree upward bend on the skids to keep them from digging into the ground when moving from one spot to another.

The MRC was assembled without welding, using only chain link fencing material and adapters such as purlins, pipe ending straps, and self-tapping screws sourced online.

Harrold spaced the roof hoops 3-ft. 4-in. apart and fastened a center purlin support. He added another support pipe 5 ft. from the top on either side. The hoops slipped into the 1 5/8-in. adapters which were drilled for a securing bolt. A 14 by 14-ft. UV-rated blocking tarp covered the entire top, wrapping the

sides and keeping rain off the birds.

Large eyebolts were installed in the front and back of the skids to connect shackles and aircraft cables used in towing the unit behind a truck or tractor.

"I wanted to have all waterers and feeders hung from the interior of the roof for ease of movement, so I cut short sections of pipe to install above the purlin side straps and hold 30-gal. drums of water," says Harrold. "Bell drinkers and feeders were also hung from the ceiling and the drums gravity feed the water. I also installed a four-way manifold system to connect a garden hose for refilling the barrels from a portable IBC tote using a generator and pump."

The 12 by 24-ft. MRC holds four 30-gal. water drums and handles approximately 200 broiler chickens. One water fill lasts the birds about three days.

Harrold estimates about \$1,000 of equipment is needed for fabricating the units and approximately \$4,000 worth of material is required. Including labor, he says \$6,000 is a conservative estimate of the total cost.

He built the two units for his own pasture poultry operation, but given the right opportunity, he would gladly build kits for any interested customers.

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