



David Greenberg built his self-propelled cultivator from a 19 hp. Kubota zero-turn mower. The lightweight machine produces minimal compaction.



Operator moves handle levers back and forth as needed to weed crops.

Easy On Soil, Power Weeder Is Hard On Weeds

David Greenberg's Crop Hopper is a self-propelled "plant caretaker". The lightweight machine produces minimal compaction, while the narrow wheels have little impact on vegetation in the rows. Equipped with its homemade Reggie-style weeder heads, it can stir the soil from 1/2 to 2 in. deep. Equipped with discs, it can kill rows quickly. A high-clearance compost/harvest cart adds to the machine's versatility.

"It only does one row at a time, but it is very thorough," says Greenberg. "It can be as aggressive as you want. It can just kiss the surface or send the weeds flying with no soil left on the roots."

The Crop Hopper was first featured on farmhack.com, an online community of FARM SHOW-type inventors and tinkerers.

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Greenberg worked with Ari Herel, a local engineer and fabricator, to fashion the self-propelled cultivator from a 19 hp. Kubota zero-turn lawn mower. The engine, wheels, and rear drive axle are mounted to a 2 by 2-in. steel tubing frame. The front axle with caster wheels is attached to the front at a central pivoting point.

A hydraulic pump was fitted to the output shaft that previously powered the mower deck. It now drives a hydraulic wheel motor connected to the twin weeder heads.

The 9-in. dia. heads each hold 6 hay pickup tines. The 2 heads are mounted on a parallel pickup arm for vertical positioning with the

touch of a finger. Left/right movement is controlled by arms in front of the operator, while foot pedals control speed and steering of the machine.

"It is slower than cultivating 3 or 4 rows at once," admits Greenberg. "However, it is much more responsive. Even doing one row at a time, I can cultivate half an acre in 45 min. and have a beautiful weed-free crop."

He says the Crop Hopper has excellent traction, uses little fuel, and is a lot of fun to operate.

The rig has rack and pinion power steering for the front wheels and hydraulic fluid metering for steering of the rear wheels. It also has a bench seat with the steering wheel on the left so one person can steer while a second person controls the weeders.

"It has a toggle switch that lets the operator bypass the steering wheel and steer with his feet while controlling the weeding heads with his hands," says Greenberg. "Like the original, it has a 3-pt. hitch, sweeps to take out wheel tracks, and a rod weeder for the small band between rows."

The new weeder has 2 by 4-in. steel tubular framing with a 60-in. width. This lets it straddle two 30-in. rows. The 22 hp. Kohler is a larger engine.

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They Specialize In Big Military Equipment

If you're looking for used military equipment, C & C Equipment is a good place to start. Owner Clinton Chitwood has bought and sold more than 100 Unimogs alone in the past decade. "We've probably sold more Unimogs than anyone else in the country," says Chitwood.

Featured in FARM SHOW (Vol. 34, No. 6) for its Unimog and converted truck sales, the business has grown since that time. A visit to the company website shows photos, price tags and features of dozens of dozers, military surplus trucks and, of course, several Unimogs.

Many of the rigs are low mileage. The \$22,999 Unimog is a 1987 model with a little over 2,000 miles and less than 30 hrs. on it. A very clean, 1984 5-ton military cargo truck has only 4,000 miles on it, was rebuilt around 2007, and is priced at only \$9,999. A 1991 Humvee with around 13,000 miles on it is priced at \$15,999.

Not all of Chitwood's equipment is decades old nor is it all military surplus. The "For Sale" listing includes a 2015 Bobcat skid steer, a 2012 Toyota forklift and a 2012 Deere backhoe/loader for \$39,999.

Tracked equipment is a mix of military surplus and civilian brands. However, trucks and attachments, like the \$2,000 expandable shop van, are generally military in nature. So is the impressive list of parts designated for 2 1/2 and 5-ton trucks.

"I've been dealing in military surplus for the past 11 years," says Chitwood. "I bought a surplus truck for myself, and a customer said he was looking for something similar."

That was 500 surplus military trucks ago. Chitwood specializes in 6 by 6 2 1/2-ton and 5-ton trucks. He has sold them to potato farmers, grain farmers and watermelon farmers, among many others.

"We have around 75 pieces of equipment here now, as well as thousands of parts, new



The two best sellers at C & C Equipment are Unimogs (left) and Hummers.

and used," says Chitwood. "We part out trucks and other equipment and have almost every part used in 2 1/2-ton and 5-ton military trucks."

One thing that has changed over the years is the age of the equipment. While he still has a lot of trucks from the 1980's in stock, more and more are from the late 1990's and early 2000's.

"We used to get trucks from the 1960's

and 70's," says Chitwood. "They were mechanically simple and easy to work on. Now we are getting into the electronic transmissions and newer mechanics."

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Simple Sheep & Goat Equipment

"When we started raising goats there wasn't a lot of equipment in our area to choose from. So my dad and I made our own feeders for both goats and sheep," says Darren de Jong, Kitscoty, Alberta.

"We built them cheap. But the real benefit is their modular design," says de Jong. "You can easily take any of these products apart to haul in your pickup."

Bale Feeder: It's made entirely from 3/8-in. dia. rebar and consists of a series of 3 1/2-ft. high by 5-ft. long hinged panels, weighing just 30 lbs. each. A metal rod drops through hinges on both sides of the panels to lock them together. To load a bale you just fold a panel or two outward.

The feed-through rebars are set at an angle

and spaced 6 in. apart, "so the animal is less likely to have to deal with crowding and can stick its head all the way in between the bars."

Grain Feeder: Made from 1 by 6 lumber and rebar, the 6 or 12-ft. long grain feeders look like large planter boxes and are suspended off the ground by a pair of welded-together rebar frames that serve as leg stands. Extra wide bases on the frames help keep animals from tipping the feeder over.

Milking Stand: The milking stand (not shown) can also be used for trimming and grooming. It measures 2 ft. wide by 4 ft. long and has an expanded metal floor elevated.

A set of 5 bale feeder panels sells for \$400 (Canadian). Grain feeder leg stands sell for



Modular bale feeder consists of 5-ft. long hinged panels that hook together. Lets you quickly convert from small to big bales. Simple grain feeder (right) breaks down easily for transport.



\$20 per pair. The milk stand sells for \$250.

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