

## Made It Myself

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### Cultivator-Mounted Side Dress Fertilizer Applicator

"It lets us sidedress nitrogen in corn while I cultivate and didn't cost much to build," says Paul Bartel, Tatamagouche, Nova Scotia, who mounted dry fertilizer boxes from an old Deere 7000 Max Emerge planter on his Koehn 6-row, 30-in. row-crop cultivator.

Bartel removed the three fertilizer boxes from the 6-row planter and mounted them on the cultivator frame so he could load them from the rear. He put a hydraulic motor on one end of the fertilizer auger shaft and extended the driveshafts between boxes with pieces of pipe because the boxes are spaced farther apart on the cultivator than on the planter. He used 2-ft. lengths of fairly stiff yet flexible hose for down spouts and put a plastic pipe at the end of each hose, fitted with a 45 degree elbow that lays the fertilizer up close to the plants.

"The extra boost of in-season fertilizer produces bigger ears," says Bartel. "Each box holds 500 lbs. of fertilizer. We usually apply about 100 lbs. per acre. By

adjusting hydraulic flow and tractor speed, we can apply just about any amount of fertilizer we want. We spent \$180 for the motor and about \$250 total.

"The flexible pipes won't break if they hit the ground and they're mounted to the side of the row so they won't break off corn plants. The length of the down spouts can be cut according to the height of the crop. When corn is small I cultivate and side dress at the same time. When side dressing at a later stage, up to tasseling time, I just raise the cultivator off the ground and extend the hoses as needed. After I'm done cultivating I put the fertilizer boxes back on the planter for the next season."

The cultivator toolbar was a different size than the planter toolbar so Bartel made new steel brackets to clamp the boxes on.

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### Flatbed Bale Mover Built Out Of Old Combine Parts

By Alice & Robert Tupper

Big bale mover built by Fairfax, S. Dak., dairyman Benny Baker, out of old combines is unlike anything on the market.

A huge hydraulically-controlled grapple arm loads bales onto a flatbed platform positioned close to the ground between two hydrostatically-powered drive axles which were taken from a pair of 1955 Deere self-propelled combines. Baker bought the used machines for \$500. He stripped them down to the basics, taking the two drive axles and the best engine and cab to use on his new bale mover. Other miscellaneous parts and structural components were also salvaged. The main frame was built out of 10-in. I-beam and scrap steel.

The front axle supports a "turntable" that supports the front of the flatbed hay sled. A hydraulic cylinder pivots the axle from side to side for steering. Hydraulic power for steering and brakes comes from the original pump that was used to raise and lower the corn and grain heads. Baker decided not to power the front wheels

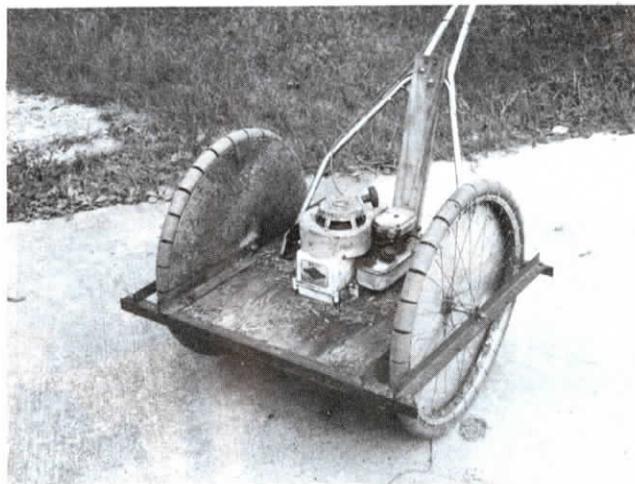
since he never moves bales when fields are muddy or soft but he says you could easily activate them by adding an additional hydraulic motor.

Rear wheels are driven by combine transmission which is powered by a toothed flat belt off rear-mounted engine.

The machine can carry 12 bales on the flatbed and one in the grapple fork resting on the frame above the front wheels. Speeds range from a crawl to about 18 mph on a hard surface.

Hydraulic cylinders control the grapple fork and section arm. One cylinder swings the arm to either side and a second raises the first section while a third raises the second section of the arm. A fourth cylinder rotates the fork while a fifth opens and closes the fork. All cylinders are powered by an engine-driven Farmhand hydraulic pump through control valves mounted in the cab.

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### "High Wheel" Double-Bladed Brush Mower

"It absolutely destroys everything in its path," says Daniel Krenzler, Cullman, Ala., about the "high wheel" double-bladed brush mower he built by mounting a plywood deck between a pair of 26-in. dia. bicycle wheels, then bolting a 3 1/2 hp Briggs & Stratton engine on top of the deck with a double set of mower blades under it positioned 9 in. off the ground.

The 3/4-in. thick deck is bolted to an angle iron frame that bolts onto each bicycle wheel hub. Krenzler wired puncture-proof, 2-in. dia. rubber gas hose onto each wheel rim in place of tires. He screwed a circle of sheet metal to the inside of each rim to keep chopped material from plugging up the wheel spokes. Handles from a junked-out lawn mower are bolted onto the back of the deck.

"It'll grind up almost anything in its path, including heavy weeds and woody brush or trees up to 1 in. in diameter," says Krenzler. "I use it in ditches and other areas thick with tall grass and weeds. By cutting 9 in. high I can clip off the seed heads on weeds without having to cut off the entire plant. It mows right over tree limbs, stones, cans, bottles, and even cinder blocks without touching them. I can tip the deck back so that the blade is at a 45 degree angle while mowing. Because of the big wheels it's much easier to push than a conventional lawn mower. Another advantage is that vines don't wrap up on the wheels.

"The underside of the deck is open all around the blades to keep them from plugging up. A wood shield at the back protects the generator. The double blades chop like a hammer mill and pulverize



everything they touch. Because there are twice as many blades I can run the engine much slower so it runs smoother."

The gas hose used on the wheels was difficult to bend so he used a hacksaw to cut 3/4 of the way through it at intervals spaced 3 in. apart and used copper wire to tie it to the wheel rim. "The copper wire won't deteriorate like steel wire when exposed to grass acids," says Krenzler.

Krenzler used the same double-blade idea to modify an old Murray lawn mower. It has an open front and wheel extensions that allow it to cut 5 in. high through small brush. The blades stick out almost 1 in. in front of the deck so they can cut through small trees before the mower frame hits them. "I call it my hand-operated Bush Hog. It really grinds up brush," says Krenzler. "I built it two years ago to clear a brushy area that had some nice pine trees I wanted to keep. I was going to rent a Bush Hog, but a tractor would have ruined the trees and would have been harder to turn."

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