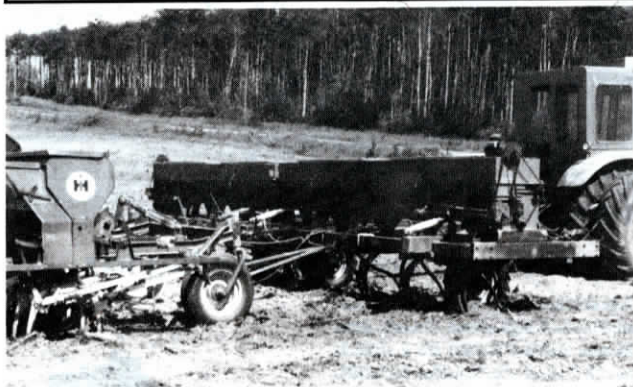


Made It Myself

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They Built Their Own Deep Band Fertilizer Rigs

Delmar Kirk of Hamiota, Manitoba, and Harold Warkentin of Tofield, Alberta, built their own low-cost deep band rigs from used equipment by mounting fertilizer boxes on top of deep tillage implements. They say deep banding cuts fertilizer use by more than a third with no change in yields.

Kirk mounted a 12-ft. wide fertilizer box removed from a Massey Ferguson model 63 seed drill on a 12-ft. Graham Hoeme chisel plow. "I built it because I got tired of paying someone else \$6 per acre to deep band for me," says Kirk. "I spent less than \$1,000 to build my deep band rig, including the \$300 I paid for the chisel plow and \$500 for the fertilizer box. It paid for itself in the first 300 acres. The only limitation is that the fertilizer box is too small. I can cover only 9 acres before I have to refill."

Kirk laid two 12-ft. long, 2 by 10 planks together on top of the chisel plow frame, then bolted the fertilizer box to the planks. As the main hydraulic cylinder lowers the plow to the ground, a small hydraulic slave cylinder uncovers the box's feed openings. Flexible tubing runs from the openings down along the back of the shanks to banding tips bolted on behind the shovels. Kirk made the banding tips by cutting off short lengths of 1-in. dia. pipe removed from a broken auger shaft. The fertilizer box's drive wheel, removed from an old Chevrolet car, is mounted on a shortened-up axle from a Versatile swather. The drive wheel mounts on one end of the frame and runs off one of the wheels.

Warkentin mounted a 28-ft. Barber fertilizer spreader on an old 36-ft. Edwards rod weeder. He rebuilt the frame to form two separate 14-ft. wide units, then mounted a 14-ft. long fertilizer box on each unit. He pulls a 28-ft. hoe drill behind the deep bander, allowing him to deep band fertilizer, rod weed, seed, and pack (with the hoe drill's press wheels) all in one operation.

"It cost only \$1,500 to build and works as well as any commercial deep band rig," says Warkentin. "The fertilizer boxes on most commercial deep band rigs sit 7 ft.

off the ground so it takes a 6-ft. high drill fill to fill them. The top of my fertilizer boxes is only 5 ft. high - the same height as the drill so they're both easy to fill. I had been broadcasting fertilizer, but I wasn't getting the crop yields that I wanted. Deep banding is a more efficient way to use fertilizer and my system saves field trips, conserving soil moisture. I've cut back 30 to 40% on fertilizer volume without any yield loss."

The shanks are arranged in two rows 16 in. apart. The shanks within each row are 32 in. apart, but are staggered to leave 16 in. openings. Warkentin used 4-in. square tubing to build the 14-ft. wide frames. The rod weeder's transport wheels ground-drive the fertilizer boxes. He attached a rope to the hydraulic lift cylinders on each unit which allows him to disengage the fertilizer box drive shaft after he raises the shanks out of the ground. The fertilizer boxes are equipped with feed openings spaced 6 in. apart. Warkentin uses 10 in. collector spouts to gather fertilizer from every two openings. Fertilizer is directed through 1 1/4-in. flexible tubing to the shanks. "The hoe drill that I pull behind the bander is on 8-in. spacings so the fertilizer band is never more than 4 in. from the seed," notes Warkentin. "The fertilizer box is equipped with a complete range of application settings and an acre counter which takes the guesswork out of application."

The original fertilizer placement boots had a bend in them which sometimes blocked fertilizer. Warkentin rebuilt the boots to make them straight. To transport the deep bander and drill he removes bolts to separate both the deep bander and drill into four 14-ft. long sections which he pulls one ahead of the other behind his tractor.

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Photo of Warkentin's rig courtesy Grainews.



Electric Can Crusher (45 Per Minute!)

"It does the job of commercial units that cost \$1,800 or more," says Clarence Vetsch, LaCrescent, Minn., who stopped by our FARM SHOW offices to show us the electric can crusher he designed and built. He says building one would be a good project for youth groups who could gather the cans from local restaurants and bars, crush them, and then sell them for recycling.

Vetsch got the idea when the manager of a local American Legion post complained about the problem of getting rid of cans. The machine he built is ideal for bars and restaurants. "They can put it under a counter and cut a hole through the floor so the crushed cans drop into a bin in the basement," he says.

The crusher uses a 1/4-hp Dayton split phase gear motor that's got a built-in 42:1 reduction gearbox. An offset crank arm attaches to the output shaft. It drives a push arm that's attached to the can-crush-

ing cylinder which Vetsch made out of heavy 2 by 2-in. tubing with a cap over the crushing end. It moves back and forth in a channel made from two angle irons butted together. The crusher makes 45 strokes per min. Crushed cans drop out the bottom. Cans are placed onto a load ramp that can be made to any length. "It goes so fast you can hardly keep up with it," says Vetsch, noting that aluminum sells for 24 cents per lb. right now (about a penny a can) but has been as high as 60 cents per lb.

The gear motor cost \$170. All other components were made from scrap. Vetsch says he'll build the crushers for \$280 but notes that anyone is free to copy the idea. He also makes the "world's best" nutcracker featured in a previous issue (Vol. 10, No. 5).

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"Old Truck" Dump Trailer

"My brother and I needed something to haul dirt and rocks on our farm," says Edward Stanley who farms near Caddo, Oklahoma. The two men paid \$100 for a wrecked 1972 Chevrolet dump truck that was missing the engine and radiator.

"We cut the frame off in front of the dump bed and welded a gooseneck hitch to it. A 7 hp. Briggs & Stratton motor powers the hydraulic pump. We added a jack shaft to boost power and reduce rpm's going to the pump.

"We have only about \$600 total invested in the dump trailer and we were able to sell the transmission and other parts from the truck to help offset the cost. The trailer works great. The best part is that you don't have cost of license tags, antifreeze, clutches and other things that we'd have with a truck."

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