Watershed Management's ditcher has been totally reengineered into a pull-type unit.

"Giant Wheel" Rotary Ditcher Still Going Strong

Several years ago FARM SHOW first featured this "giant wheel" rotary ditcher designed and built by Junior Liebrecht of Continental, Ohio (Vol. 19, No. 1). The machine has recently been totally re-engineered and converted from a 3-pt. mounted unit to a pull-type and it's being marketed by Watershed Management Co., a partnership based in Mt. Sterling, Ohio, that includes Carl Hamman and John Miller along with Liebrecht.

The partnership is offering franchise and lease agreements to farmers and ranchers throughout the U.S. "This is an excellent opportunity to start a new business providing extra income," says Hamman. "We provide training, support and topographical mapping capability. The topographic maps allow us to determine whether surface drainage is feasible and to calculate the most efficient route, depth, and grade for proper drainage and erosion control. We can design a complete surface drainage system to effectively drain low areas and prevent crop loss."

The pto-operated ditcher consists of an 8-ft. dia. steel wheel fitted with 8 bolt-on digger buckets and a replaceable steel wear band inside the wheel housing. Soil is scooped up and then carried 180 degrees to the top of the wheel, then thrown out of a hood at the top. A hydraulic cylinder is used to direct the hood's deflector up or down or forward or backward to direct the flow. A pair of hydraulic-controlled blades, one on each side of the ditcher, can be adjusted up or down to control the side slope of the ditch.

According to Hamman, the new ditcher works like the original one but is more reliable and needs less maintenance. With the side blades down, the unit can make a 10-ft. wide, 1-ft. deep ditch in a single pass. If deeper ditches are required the operator simply makes more passes. The big wheel spins at 170 rpm's and the eight buckets can throw soil as far as 150 ft. to the side or it can deposit soil right next to the ditch. A laser is used to guide the ditcher to the proper depth. Grades as slight as 3 in. of fall per 1,000 ft. can be maintained. The ditcher can move about 8 yards of soil per minute. Soil can be spread evenly across the discharge area or, with the use of a special hood, be loaded into a truck. By changing the pitch and angle of the discharge spout the operator can use the ditcher to make terraces.

Steel wheel is fitted with 8 bolt-on digger buckets.

"Some advantages of the ditcher are no soil compaction, no clods or slabs, and the cost per foot is much less than earth movers. It also works great for repairing existing grass waterways," notes Hamman.

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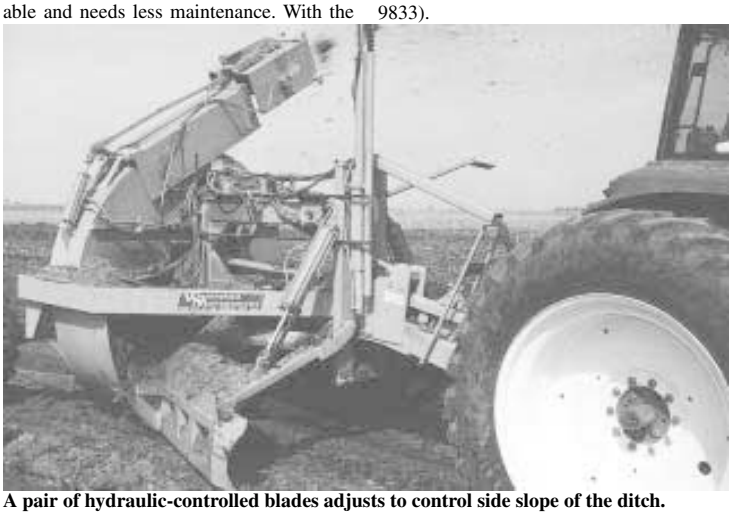

A pair of hydraulic-controlled blades adjusts to control side slope of the ditch.

Riding on 66 by 44-in. flotation tires, the rig can be used either as a fertilizer spinner spreader or as a sprayer.

"WE SAVED ABOUT $50,000"

3-Wheeled "Swamp Buggy"

Dale Brock and his son Troy, of Harrisburg, Ore., grow about 1,500 acres of grass seed on low, soft ground. They needed a high flotation machine that would apply fertilizer and herbicides without compacting the soil, but they couldn't justify the cost of a commercial sprayer. They solved the problem by building their own 3-wheeled "swamp buggy" for about half the cost of a new rig.

It rides on 66-in. high, 44-in. wide flotation wheels and can be used either as a fertilizer spinner spreader (equipped with a 4,200-lb. capacity steel hopper) or as a sprayer (equipped with a 500-gal. plastic tank and 60-ft. boom). A hydraulic pump driven off the engine crankshaft raises and lowers the boom and also operates the sprayer pump.

Dale says the 2-WD rig doesn't have all the bells and whistles found on similar commercial rigs. "But it works great and we saved a lot of money."

They used a single length of 2 by 8-in. steel tubing to build the frame, which tilts upward toward the front at an 8 degree angle. Power is supplied by a 351 cu. in. V-8 gas engine out of a Ford pickup. The engine is coupled to a C-6 automatic transmission from the same pickup. The driver sits on an air ride seat and is protected by a steel "half cab" that extends up to the steering wheel.

The front wheel pivots on an axle hub off a semi truck that's bolted to the bottom of the front end of the frame. The hub is turned by a hydraulic cylinder to steer the rig. On back is an Italian-made Hurth axle and rear end with internal wet disc brakes, an 18 to 1 gear ratio, and planetary gears mounted on the outside hubs.

The machine is equipped with a Raven 660 monitor that's GPS ready.

"We started building it in February 1997 and used it that spring on 300 acres," says Dale. "Since then we've used it to apply fertilizer twice every spring and to spray once or twice. We've also done some custom fertilizer spreading with it. We kept the weight down by installing a lighter weight axle and by using a plastic tank instead of a steel one. Six bolts hold the sprayer frame to the swamp buggy and two bolts secure each tank. It takes only about an hour to switch from spraying to spreading.

Front wheel pivots on an axle hub off a semi truck that bolts to front end of frame.

"The rear end's low 18 to 1 gear ratio compensates for the rig's big tires so we can drive slow. We spray at 12 mph and spread fertilizer at 15 and 20 mph. The fertilizer spinner has a 60-ft. spreading width. However, we usually overlap and spread 30 ft. wide at a time."

Brock says they're not quite finished with the machine yet. "We plan to finish the cab and convert the machine to 3-WD. We'll drive the front wheel off a transfer case that's already on the machine. Most commercial 3-WD swamp buggies direct-drive the front wheel off the engine crankshaft, which makes it harder to get the front wheel to turn at the same speed as the rear wheels."

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A single length of 2 by 8-in. steel tubing was used to build the frame.