



Spreader was made from a 250-gal. fuel tank. To create the flail bar, Martin welded chains to opposite sides of a steel pipe at 5-in. intervals.

## Garden Tractor Flail Spreader

By Jim Ruen

Ronald Martin wanted a small manure spreader he could pull behind his garden tractor and pickup, neither of which have a pto. He came up with an innovative flail-type spreader that's powered by its own 8 hp Kohler engine.

"I wasn't convinced a ground drive system would have enough power," says Martin, who spent less than \$600 to build his flail-type spreader, not counting the engine. It holds between 25 and 30 bushels and it has enough power to tear apart packed manure from his steer pen.

Martin picked up a 250 gallon fuel tank from a nearby manufacturing company. Rejected for fuel storage, the tank was discounted to \$100, and because it was new, he didn't have to worry about fumes when it came time to torch the opening.

The spreader's 8-ft. long frame was built out of 4-in. channel iron and designed to come to a point just ahead of the engine which is mounted at the front end of the unit. At the point, Martin mounted a 2-in. hitch receiver on the bottom side of the channel iron. He then designed a hitch with a 6-in. drop (similar to those found on camper trailers) which, when slid in upright, allows the spreader to be pulled behind his pickup truck, and when reversed, fits the drawbar of his garden tractor. When the unit is stored, it can be removed entirely to save space.

The frame mounts on a rear axle, spindles and wheels from a front-wheel drive car which Martin picked up at a local junkyard. The only change made before welding the axle to the frame was to shorten its length to 42 in. so the spreader would fit through

Martin's 48-in. barn doors.

The tank itself was torched open with 66-in. horizontal cuts at the three o'clock and nine o'clock positions and 32-in. vertical cuts. The heavy 10 ga. steel in the tank meant that only the top edge, which was hinged to a flat 10 gauge lid, had to be reinforced. By hinging the lid and reinforcing it with 1-in. angle iron, it could be opened for easy filling and closed for spreading. Triangular wings welded to either end of the tank provided the base for the closed lid, and doing so, created the space for material to exit.

To create the flail bar, Martin welded 1-in. shafts to either end of a 2-in. steel pipe. High tensile, 1/4-in. chains were welded to opposite sides of the pipe at 5-in. intervals. A piece of 2 by 2-in. flat iron was then bolted to the end of each chain.

Martin mounted the pipe in place with four-bolt bearings at the center of either end of the barrel. A heavy V-belt running off the Kohler engine and through a jack shaft to reduce speed, drives the shaft at 300 rpm's. The two bearings on the main shaft and the two on the jack shaft, along with the V-belt, are the only likely wear points on the spreader. Minimal maintenance and simplicity were goals Martin had from the beginning.

"The whole project took about 20 to 25 hours, and I can pull the loaded spreader with my 10 hp Wheel Horse garden tractor."

Contact: FARM SHOW Followup, Ronald Martin, 260 Chestnut Hill Rd., Fredericksburg, Penn. 17026 (ph 717 865-9604).



Spreader is powered by its own 8 hp Kohler gas engine.

## "Corny" Christmas Tree

Every year when it's time to trim the Christmas tree, Sarah Morgan of Vestavia Hills, Alabama, starts collecting all her ornaments. However, these ornaments aren't what you might normally expect – they all have a common theme, and it's corn. She calls them "cornaments".

Morgan's "corny" Christmas tree is decorated with lights in the shape of corn, strings of popcorn, corn husk dolls, yellow and green ears of corn made from pottery, seed corn key chains, and anything else she can find that's "corny". At the top of the tree, instead of an angel you'll find small ears of Indian corn along with their husks.

Plastic life form food replicas that hang from the tree show whole kernels of canned corn as they would appear if heaped on a dinner plate. There are corn cob pigs made by her father, as well as corn-on-the-cob holders hung on gold threads. Sitting at the base of the tree is a teddy bear and a pig, both made out of seed corn sacks. Even the tree skirt is made from corn fabric.

"It's a lot of fun to decorate and fun to look at," says Morgan. "I've collected corn ornaments for years. My family is still in Iowa."

"I get ornaments from a variety of sources. I bought the corn lights from Partylights.com (4317 Montrose Blvd., Houston, Texas 77006; fax 713 529-0181; Website: www.partylights.com. A 12-ft. strand has 10 ears of 4-in. high corn lights on it and sells for \$12.95).

"I also write to seed corn companies and get their catalogs to order things such as corn-shaped cookie cutters. I got some of my ideas from members of the Corn Items Collectors Association (Lloyd Mitchell, 40 North 33rd Road, Peru, Ill. 61354 ph 815 223-8935). For example, I bought the seed company key chains from a member of the club. Teddy bears and pigs made out of seed corn sacks are available from Mid-State Bears (Box 542, Ladd, Ill. 61329 ph 815 223-8935).

"I'm a clinical nutritionist at the University of Alabama at Birmingham and use diet food models in my work, which is how I knew about the life form food replicas." (NASCO, 901 Janesville Ave, Fort Atkinson, Wis. 53538 ph 800 558-9595; E-mail: info@enasco.com; Website: www.enasco.com).

The pottery corn ears are sold by Sunflower Pottery, 604 Franklin, Pella, Iowa 50219 ph 515 628-8369.



All the ornaments on Morgan's Christmas tree have something to do with corn.



An ornamental ear of corn.



Corn husk dolls.



Plastic replicas of canned corn.

Sarah Morgan's E-mail address is: morgans@shrp.uab.edu.

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