

Homemade Roller Mill Cracks Corn Fast

Wayne Brown wastes no time when cracking corn for his or his neighbor's horses. His homemade roller mill can do 50 lbs. of corn in 2 1/2 min.

"I made it for my needs, but it would be easy to make something similar that was bigger or smaller as needed," says Brown.

The rollers are 4 1/2-in. outside diameter pipes with grooves cut in them at 1/4-in. spacings. Brown cut the grooves with a milling machine so they are straight on one side and angled on the other to catch and hold the corn.

The rollers are mounted on 1-in. shafts that ride in pillow block bearings on an angle iron frame. Brown had to cut one of the mounting flanges off each pillow block in order to mount the rollers close together.

End plates made from 9-in. long, 1/4-in. steel plates have two 2-in. wide slots in them to fit over the shafts. They are also welded to the frame and sit just inside the pillow block bearings. They form the base for the hopper.

Two pieces of 10-in. long, 2 by 2-in. angle

iron welded to the end plates form a 6-in. wide throat and base for the hopper. They are placed to just clear the rollers while directing the corn into them.

"I tack welded them in place before fixing them permanently," says Brown. "The hopper is 14 1/4 in. by 22 1/4 at the top and narrows to 10 1/2 by 6 in. at the bottom. I bent the top edge to give it a 3/4-in. lip for added stability."

Brown mounted a 1.56 hp motor on the frame to one end of the rollers. To slow down the 125-rpm speed on the motor shaft, he mounted a 2-in. pulley on it and a 9-in. pulley on one of the roller shafts.

"If it goes too fast, you get all meal instead of cracked corn," says Brown.

On the opposite end of the rollers, he mounted 12-tooth sprockets on each shaft. A roller chain runs around one shaft and over the other to a spring-loaded idler sprocket. The over/under reverses drive direction of the second shaft so the rollers turn against each other.



Homemade roller mill sets on angle iron legs with room to slide a bucket underneath (left). Rollers are 4 1/2-in. outside dia. pipes with grooves cut in them at 1/4-in. spacings.

"The cracking unit sits up on angle iron legs with room to slide a bucket underneath," says Brown. "Flaps to the sides of the rollers hang down below them to direct the cracked

corn into the bucket. It works great."

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Mower Cart Helps Feed Horses

Watching his wife carry feed back and forth to 16 boarded horses got Richard Ahearn thinking of an easier way. He stripped the motor off a salvaged lawn mower and replaced it with a plastic tote.

"The tote was big enough to hold about 100 lbs. of grain," says Ahearn. "Grain scoops fit in the corners to hold any needed supplements. Now she can make a single pass down the stable alley with everything she needs."

Ahearn bolted the tote in place. So far there have been no problems, unlike commercial carts he has tried in the past.

"A lot of the grain carts you buy have wheels that are too small and parts that break off," says Ahearn. "If this lawn mower breaks down, I'll got to the dump and get another



Richard Ahearn replaced the motor on this old push mower with a plastic tote that holds about 100 lbs. of grain.

one."

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L-shaped steel brackets keep stabilizer bars in place on tractor's 3-pt. lower lift arms, even when the 3-pt. isn't hooked up to an implement.

Brackets Keep Stabilizer Arms In Place On Tractor's 3-Pt.

"I designed a set of steel brackets to keep the stabilizer bars on my Ford 860 tractor in place on the tractor's 3-pt. lower lift arms, even when the 3-pt. isn't hooked up to an implement. Now whenever I want to change 3-pt. implements I don't have to remove the stabilizer bars. It's a real time saver," says Larry Goodman, Ionia, Mich.

"I welded L-shaped brackets onto the stabilizer arm, which I purchased at a local tractor supply company. The brackets are located about 8 in. from the end of each

stabilizer bar and extend 3 1/4 in. out and then 3 in. down, where they lay over the top of the 3-pt.'s lower lift arms.

"It eliminates the need to remove the stabilizer bars from the tractor every time I want to change 3-pt. implements, or to wire them up," says Goodman.

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Skid loader-mounted burn cage measures 9 ft. long by 5 ft. 2 in. high by 5 ft. deep. "It can be easily moved to a safe area for burning and is big enough to save a lot of time and labor," says Marion Schrock.

Loader-Mounted Giant Burn Cage

"It has a lot of capacity and can be easily moved to a safe area for burning," says Marion Schrock, Bellefontaine, Ohio, about the big skid loader-mounted portable burn cage his neighbor built for him.

The burn cage measures 9 ft. long by 5 ft. 2 in. high by 5 ft. deep and is made entirely from 1 1/8-in. galvanized steel fence panels attached to a 2-in. angle iron frame. The frame is reinforced with rebar at the bottom and is fitted with a pair of steel tubes.

"It works great to burn trash in large quantities and saves a lot of time and labor. The cage is big enough to hold up to a week's worth of trash," says Schrock. "I occasionally use the skid loader's bucket to keep mashing the boxes down until the cage is full.

"We operate a bulk food store located

close to a busy road and go through a lot of cardboard boxes. In the past, we burned trash in a small burn cage behind the store but flying embers became a hazard. We still keep the new burn cage behind the store, but once it gets full I move it back behind our barn where I set it down on the ground and light it on fire. The next day I use the skid loader's bucket to tilt the cage and dump the ashes out. I can raise the cage high enough to see under it as I drive."

Schrock says the same idea could be used to serve as a big "dump-out" bulk carrier.

He spent about \$1,300 to build the burn cage. Contact: FARM SHOW Followup, Marion Schrock, 6265 U.S. Hwy. 68 N, Bellefontaine, Ohio 43311 (ph 937 468-7733).

Transmission Fluid Keeps Plastic Pipe In Good Shape

"The rust inhibitor chemicals in my outdoor wood burning stove were too harsh and caused a plastic pipe that delivers water underground to my house to become brittle and disintegrate. I switched to automatic transmission fluid and that solved the problem," says Gary Schmitt, Croghan, N.Y.

Schmitt adds the transmission fluid to the water jacket in his 8-year-old wood stove.

"The heated water runs through 1-in. dia. plastic pipe that runs 90 ft. from the stove to our house and back," says Schmitt. "About 4 years ago I started to notice we weren't getting enough heat in the house, so I went out to the stove and found the exposed pipe where it comes out of the stove was very brittle. In fact, when I pinched it between my finger and thumb it crumbled away like a cracker.

"I thought maybe the pipe wouldn't be as brittle underground so I dug up about 6 ft. but found the same problem there, too. I ended up draining all the water and replacing the entire 90 ft. of pipe. I knew that transmission fluid is a good lubricant and I happened to have 7 quarts on hand, so when I refilled the water jacket I added the transmission oil in. I haven't had any problems since.

"The replacement pipe I installed is made with a layer of aluminum sandwiched between 2 layers of plastic and is guaranteed for 30 years. I bought it from my local plumbing dealer."

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