



Rod Stremlo's big home-built sifter is able to handle compost using a front-end loader. There's room underneath for loader to retrieve a bucketful of sifted compost.

Loader Bucket-Sized Compost Sifter

After years of screening compost into a wheelbarrow, Rod Stremlo's big sifter handles compost by the loader bucket. It turns a laborious and time-eating chore into a quick and speedy task at the family's Brook Hollow Farm.

"It took me 45 min. to sift out a wheelbarrow full of compost and a lot of shoveling," says Stremlo. "We need 2 or 3 tons of compost to build new garden beds. Now I do a loader bucket full in a few minutes."

Stremlo's sifter is 2 ft. wide and 12 ft. long. It's mounted on a frame made from old goal posts and steel tubing. Uprights at the upper end where the engine sits were salvaged from an old mobile home trailer tongue.

The sifter was designed to leave room underneath it for the loader to retrieve a bucketful. The lower end of the screen leaves room for a wheelbarrow to be pushed underneath it to collect larger particles and materials not fully composted. They are wheeled back to the composting pile.

"I've found the returns speed up the

composting process," says Stremlo.

Most of the sifter was recycled from one use or another, but the motor with factory installed gear reducer was actually fresh out of the box. Stremlo purchased it at a yard sale. He later found out that it sat on a shelf for 20 years.

"I put gas and oil in it, and it started right up," he says.

The screen is slotted, expanded mesh with an overlay of "rat wire" (hardware cloth). Stremlo added the hardware cloth to reduce the hole size and resulting particle size. The screen frame rides on plastic wheels that are mounted to uprights on the main frame.

The sifting screen moves up and down at an angle, with finished compost sifting through and large scraps needing more time in the compost pile falling off the end.

The sifter is powered by a 3 1/2 hp. motor with a built-in 6-to-1 gear reducer. The output shaft with a small sheave drives a larger old cast iron sheave on an old air compressor pump. This reduces the output shaft speed



The 2-ft. wide by 12-ft. long sifter mounts on a frame made from old goal posts and steel tubing.



Screen frame rides on plastic wheels mounted to uprights on main frame. Offset drive with springs provides screen with 1 1/2 in. of lateral movement with each revolution.



even more.

As the air compressor pump's only purpose is to provide a housing for the drive sheave, Stremlo removed the pistons and rod and filled the compressor with oil. He drilled a 3/8-in. hole in the arms of the cast iron sheave 3/4-in. from the center of the shaft and installed a grade-8 bolt in the hole.

Once the offset bolt was connected to the screen, it provided about 1 1/2 in. of lateral movement with every revolution.

The connecting arm is a set of shock absorber type springs from an old conveyer dishwasher. "One spring in the pair regulates how hard it pushes the screen downhill, and the other regulates how hard it pulls the screen back up the slope," says Stremlo. "When the screen slides downhill, the engine has to work hard pulling it back up. The spring reduces that effort."

Stremlo notes that his sifter isn't quite finished. If he dumps raw compost onto the screen too fast, it can stop the screen in its tracks.

"The answer may be to mount a hopper from a pickup-mounted salt spreader," says Stremlo. "It would better regulate how fast compost drops onto the screen."

Meanwhile Stremlo remains satisfied with his design and its price tag. "I only have about \$200 in it, and half of that was for the paint I used," says Stremlo. "I did a good job painting it when it was new."

Check out a video of Stremlo's compost sifter at FARMSHOW.com.

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Jay Boldt converted a used shipping container into a commodity bay for high moisture corn. A hammer mill sets inside one end of container behind a wooden wall.



Low-Cost Commodity Bay

Jay Boldt, Manitowoc, Wis., bought a used shipping container last winter and converted it into a low-cost commodity bay for high moisture corn.

He paid \$1,350 for the 20 by 8-ft. shipping container. He set an electric-operated WIC hammer mill inside one end of the container and built a short wooden wall in front of it. An auger delivers shelled corn from the silo through one side of the container and into the hammer mill. The hammer mill unloads the ground corn into a pile on the other side of the wood wall. Boldt uses a skid loader to unload the feed.

"I'm happy with how it turned out, because it works fast and I saved a lot of money," says Boldt. "It didn't cost much to get this system up and running, compared to pouring concrete and putting a roof on a conventional commodity bay. The only limitation is that the biggest thing I can use to load the feed is a skid loader. I may move the bucking wall



Ground corn is dumped onto a pile for removal by skid steer.

closer to the end of the container so I can use a loader tractor or telehandler instead."

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Designed mainly for vegetable crops, Scorpion self-propelled automatic weeder can remove weeds between the rows and also between plants in the row.

Self-Propelled Auto Weeder

The Scorpion self-propelled automatic weeder cuts out weeds by the roots, working close to crops. It's designed mainly for vegetable crops and can remove weeds between the rows and between the plants in the row.

The 4-WD machine is powered by a 51 hp. diesel engine and hydrostatic transmission. The operator can oversee the hoe at work and set all the working parameters for it using a computerized touch screen.

Each row unit has an infrared optical bar to detect weeds and plants, and each unit is also equipped with a pair of hydraulic arms that hold 2 cutting blades. The arms move in and

out to remove weeds within 1/2 in. around each plant, and their working height can be adjusted by the operator.

The automatic hoe is equipped with a floating frame able to shift on both sides using hydraulic pistons. The weeder can be used on as many rows as needed for each bed, with flexible configurations. One pass is all it takes to get the job done.

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