Carl Belohlavek built this composter out of an International Harvester 715 combine.

Turbo-powered 175 hp engine is big enough to turn composter's 14-ft. long beater through a windrow 12 to 14 ft. wide and 7 ft. high.

Composter Built "Bowling Ball Tough"

By Jim Ruen, Contributing Editor

Bowling balls, engine parts, cement blocks, chunks of 6 by 6 posts and even 55-gal. drums are just some of the "extra's" Carl Belohlavek's compost turner sometimes runs into. When he took over the job of composting his town's yard waste, he had no idea he'd be dealing with that kind of junk. Fortunately, he built a compost turner that's heavy enough to handle it all.

"I started composting with a tractor and loader but it couldn't mix in enough oxygen so I decided to build a machine," says Belohlavek.

His prototype turner was built from a 715 IH combine. After taking on another job composting wood waste for a paper plant 50 miles away, he knew he needed something bigger.

"I took the engine, cab, transmission, hydraulics and wheels from a 1460 International combine," says Belohlavek. "The turbo-powered 175 hp engine is big enough to turn the 14-ft. long beater through a windrow 12 to 14 ft. wide and 6 to 7 ft. high. It'll go through 1,250 cubic yards per hour."

The 42-in. dia. beater is key to the machine's success. Belohlavek fabricated it from Schedule 1080 heavy pipe. A local machine shop cut steel plate for the ends with exactly centered holes for a 1 15/16-in. steel shaft. Everything from shaft to bearings is overbuilt to handle the torque.

"When that beater is spinning at 300 rpm's, you have to have pretty substantial spherical bearings to hold under the stress and load," he says.

Tines measuring 3/4 by 4-in. are bolted to 4-in. channel iron that's welded to the pipe. It's easy to replace a tine should one break. Belohlavek used a jig to ensure that each tine was placed exactly as needed. The 60 tines are set in three spirals that go from the edges of the beater to the center. The spirals keep the beater in balance as they lift material and toss it to the center of the turned windrow.

Heavy rubber belting hangs down both in front of the beater and to its rear. "It keeps heavy debris from flying out and hitting someone," says Belohlavek.

To ensure adequate power, Belohlavek designed two separate closed loop hydraulic circuits. One is dedicated to turning the beater and the other to the hydrostatic drive system, steering, raising and lowering the beater, and moving the cab in and out.

"When turning compost, I want the cab sticking out in front of the frame for maximum visibility," says Belohlavek. "When I'm transporting it between home and the paper plant, it sits sideways on a lowboy trailer. Then I want the cab back in line with the frame."

To accomplish both, he mounted the cab on a track with a hydraulic cylinder to move it back and forth. He can adjust it from inside the cab as needed.

Like the beater, Belohlavek made sure the frame was built extra sturdy. It needed to handle the beater plus the stress of turning large windrows on uneven ground. The entire frame, including braces, is fabricated from 6 by 8-in. steel tubing. Steel decking makes it easy for Belohlavek to service the engine and other components. A railing and ladders makes it easy and safe to climb up and over the compost turner.

"The machine is 21 ft. wide from the outsides of the tires, and it stands 13 ft., 6 in. high," says Belohlavek.

Finished compost is used in his wife's perennial nursery. He also screens and bags it or stockpiles it for bulk orders.

Belohlavek maintains a complete metal shop where he built the composter and also fabricates custom trailers. He would consider building compost turners for others, but price would depend on the combine used and the price of steel at the time.

Contact: FARM SHOW Followup, Carl Belohlavek, 780 Redfield Rd., Mosinee, Wis. 54455 (ph 715 693-3755).

Jack Downey uses an old manure spreader to spread big square bales.

Easy-To-Make Low Cost Hay Spreader

Turning an old manure spreader into a hay spreader was quick and easy. Doing so saved Jack Downey nearly $2,500 and kept his pickup available for other chores.

"A bale flaker to mount on my pickup would have cost around $4,000," he says. "Plus it ties up the pickup and limits its use to hauling hay."

Instead, Downey picked up a used manure spreader for $1,500. With the help of his grandson Tucker, he turned it into a more than adequate hay spreader.

"We pulled the beater off, but left the drag chain on the floor," says Downey. "On the back end we ran two 6-ft. long pieces of 2 by 2-in. angle iron up and a third across the top."

The angle iron is bolted to the beater mount holes. That leaves plenty of room for a 4 by 4 by 8-ft. bale to pass through, but if Downey wants to leave part of a bale in the spreader, he just ties a twine across the upright angle irons to hold the flakes in place.

"It cost about a third the price of a commercial bale flaker, and it works real well," he says. "With the power take off drive on the apron chain, I can control the unloading speed. The bale moves about three inches at a time, and normally the dry flakes fall off real well."

He pulled the beater off and bolted an angle iron frame to the beater mount holes.

Contact: FARM SHOW Followup, Jack Downey, 11520 S. Washington, Perkins, Okla. 74059 (ph 405 547-2696).

"Retractable Tine" Hay Fork For Big Square Bales

Stacking big square bales with a telehandler or front-end loader can be a tricky job, because as you load the bale on top of the stack and back away the bale often comes back, causing the stack to tip over. This new bale fork is equipped with hydraulic-operated, retractable tapered tines, allowing you to retract the tines from the bale before you back away.

The bale fork has three tines attached to a moveable steel bar that can be extended or retracted up to 8 in. by a hydraulic cylinder that mounts on a separate bar. The operator loads the bale with the tines in the extended position and has the option of retracting the tines before backing away, greatly reducing the chance that the tines will stick in the bale and tip the stack as the operator backs away.

The quick-tach bale fork was built by Solberg Welding, Harmony, Minn., for Wayne Wangsness who farms near Decorah, Iowa. He uses the bale fork on his JCB 530 telehandler.

"It works great and lets me stack big square bales without any problems," says Wangsness. "It works better than other bale forks that push the bale off the tines, because with those units you have to be careful to back up at exactly the same speed that the bale is being pushed off."

Solberg says he's willing to build the hay fork for others for an estimated price of $2,000.

Contact: FARM SHOW Followup, Wayne Wangsness, 1869 Middle Ossian Rd., Decorah, Iowa 52101 (ph 563 532-9431; waynew@oneota.net or Dennis Solberg, Harmony, Minn. (ph 507 886-4602; solbergw@mleaf.net; www.solbergwelding.net).

Bale fork has three tines attached to a moveable steel bar that can be extended or retracted up to 8 in. by a hydraulic cylinder that mounts on a separate bar.