

Liquid Manure Composting System

In only three days, Herman Tripp's patented "Compo*Starr" system produces composted "non-smelly" material that he says makes excellent fertilizer. It'll take care of up to a 600-sow operation.

Through slatted floors, Tripp catches all of the sows' waste in a 2-ft. wide by 1-ft. deep gutter system. The waste moves down to an underground holding tank. A back-flush system ensures that no solids are left behind in the gutters.

Next, the manure is mixed with ground-up corn stalks which are conveyed into the Compo*Starr unit - a 20-in. auger mixer inside a 24-in. plastic tube. Manure and stalks are mixed at a ratio (by weight) of 70 percent manure and 30 percent stalks. The Compo*Starr mixes it for three days.

The system produces 6 to 8 tons of commercially saleable fertilizer per day, which steadily trickles out of the tube into a pile or truck.

"We kept experimenting until we found the right ratio of corn stalks to manure," Tripp says.

He adds that by very slowly and continuously mixing the liquid pig waste and the fiber, he learned that it would heat up. His

recipe brings the overall moisture content down to an ideal range of 50 to 60 percent. The natural increase in temperature results in composting action and creates a "very powerful fertilizer" with no smell.

"Within 24 to 36 hours it gets hot - usually between 140 and 160 degrees - which lasts for two full days. Then on the third day, it begins to cool down and goes back to the original temperature of 60 to 80 degrees, depending on the weather."

Tripp says the steam is captured so no moisture is lost. "Some people have said they detected a slight sweet smell, like dirt," he says. "It's a very potent fertilizer that we're marketing for use on indoor house plants."

The composted machine has a nutritional value of \$50 per ton, he says. Two tons will replace \$80 to \$100 worth of commercial fertilizer.

"I've learned the incredible value of manure and am realizing \$148 of value (after costs) per sow, by replacing commercial fertilizer with this material," he says.

Tripp's mixing auger is made out of plastic. It has a stainless steel shaft, and a plastic auger-mixer in a 24-in. dia. plastic tube. He patented the unit four years ago and it has



The Compo*Starr system uses a 20-in. auger inside a 24-in. plastic tube to mix manure and ground-up corn stalks.

just now received patent protection in Canada.

"We feed everything into the auger, which turns one revolution every two or three minutes. For example, with 600 sows, we have 410 ft. of auger mixer, which mixes the material continuously," he explains. "We use a corn stalk shredder to shred two bales a day of corn stalks."

Tripp has been working on developing this system for 10 years, but he just recently began offering it for sale. He recently sold a system in Missouri. It can be installed under the alleyway of a new barn, or retrofitted to

an existing barn. It can be trenched under the ground outside the building, or placed above ground.

About eight inches of Compo*Starr is needed for one sow, he says.

It costs between \$100,000 and \$150,000 for the tube, auger mixer, power unit and insulation, depending on if it's on a new or existing barn.

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PVC Inserts Convert Drill To Row Planter

Why buy a row planter for limited acres when you already have a perfectly good drill? That was Scott Pfortmiller's thought when his dad wanted to plant 150 acres to grain sorghum. His dad had just purchased a new Crustbuster no-till drill for their wheat operation.

"Rather than buying another piece of equipment, I chose to adapt the Crustbuster," says Pfortmiller. "I could have just covered the extra openings with magnets to create the 22 1/2-in. row spacings. However, we would have needed a lot of seed or had to constantly stop and level off the seed. The alternative was to make simple box inserts over the preferred spacings."

Pfortmiller found that 5 by 5-in. pvc post housings fit neatly into the square holes in the bottom of the drill box where grain funneled downwards. Each would hold about 12 lbs. of grain sorghum seed, enough to plant about 25 acres when all were filled. What he needed was a way to stabilize them and hold them in position.

"The boxes were 19 1/2-in. tall, and with

22 1/2-in. row spacings, there would be two in each drill box section," explains Pfortmiller. "I needed to keep them upright and in place side-to-side."

Pfortmiller used U-bolts to secure two lengths of 1/2-in. pvc pipe to each pair of boxes. The top piece butts up to the right side upright in the drill box while the bottom piece butts up to the left side upright. By tightening down both sets of U-bolts once the pipes were in place, neither box could move to the side. A U-bolt with wing nuts was also installed in the sides of the pvc seed boxes.

"I installed a short length of pvc pipe through the U-bolt so it ran perpendicular to the pieces that ran the length of the drill boxes," explains Pfortmiller. "I pushed the pvc seed boxes against the back of the drill box and pushed the pipe against the front and then tightened the wing nut on each box so it can't move front to back."

To change row spacing, all Pfortmiller has to do is loosen the wing nuts to move the boxes and add more, if needed. Filling the



Simple box inserts fit neatly into the square holes in bottom of drill box. Each insert holds about 12 lbs. of seed.

seed boxes is easy, too. His dad sticks an old funnel in each box and uses an ice cream bucket to fill it.

Best of all, the entire system cost less than a fill of diesel fuel and a whole lot less than even a used row planter. "I spent about \$120 and three hours on it," says Pfortmiller.

The idea was good enough that it was accepted in the Farmer Idea Exchange at the annual meeting of the American Farm Bureau Federation. Pfortmiller and his wife received a free trip and recognition at the event.

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U-bolts secure two lengths of 1/2-in. pvc pipe to each pair of box inserts.

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Semi Truck Converted To Deere Motor Home

Hank Friday collects antique Deere tractors and likes to take them to shows. So the Rolling Prairie, Ind., man turned a 1967 Hendrickson semi tractor into a one-of-a-kind motorhome by mounting a 10 1/2-ft. long pickup camper on back. He also added a fifth wheel hitch, allowing him to pull a 35-ft. long, triple axle trailer on which he can haul the tractors.

The semi tractor, camper, and trailer are all painted Deere green and yellow. The back of the cab is cut out so he can get into the camper without having to go outside.

"It's a lot of fun to drive and draws attention wherever I go," says Friday. "People who see it for the first time give me everything from a casual look to a downright stare. The Hendrickson semi tractor has an unusually long hood that really stands out. The truck and trailer together are about 64 ft. long."

He started with two identical Hendrickson semi tractors. One of the semi tractors had a badly rusted cab but a good engine, so he cut

the cab off it and replaced it with the cab off the other semi. He cut the frame and used 1/4-in. thick channel iron to lengthen it by 7 ft. On back of the cab he built an angle frame and bolted the camper onto it.

The semi was originally equipped with a tandem axle and steering system that had no brakes. He couldn't find brakes to fit the tandem axle, so he replaced it with a single axle that's equipped with air ride suspension as well as "Bud" wheels with solid dish hubs.

The semi tractor's original air and fuel systems used copper tubing which had greatly deteriorated, so he replaced it with plastic tubing. He also rewired the entire truck.

"It's licensed as a motorhome, which is far cheaper than a truck license," says Friday. "I used a fifth wheel hitch instead of a gooseneck hitch because it's easier to hook up to the trailer by myself. The camper sleeps two and is complete with an oven, refrigerator, bathroom with shower, and hot water heater. I mounted an insulated 150-quart cooler on



Hank Friday converted a 1967 Hendrickson semi tractor into this motorhome by mounting a 10 1/2-ft. long pickup camper on back. He pulls a 35-ft. long trailer behind it.

one side of the truck and painted it white to reflect sunlight. It'll keep ice for three days.

"The semi tractor and camper were both given to me. My total expense for everything, including the trailer which I also built, was only about \$6,000."

The Hendrickson semi tractor was never a common truck, says Friday. "It was mostly used as a heavy duty road dump truck and was built in Lyons, Ill. Hendrickson was a builder of rugged tandem suspension systems and was known more for that than for build-

ing trucks. If you wanted a truck you told them what kind of engine and transmission you wanted. Then you put your money down and they built it. They installed their own fiberglass fenders and metal hood."

The semi tractor is equipped with a Detroit 671 diesel engine and a 10-speed Road Ranger transmission. "The engine has about 238 hp," says Friday.

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