

Home-Built Milk Parlor Just Right For Small Farm

Few people with back trouble would consider milking cows as a way to generate income, but it didn't stop Samuel Gassert, Hammond, New York.

Starting on a shoestring and not much else, Gassert has established a small herd that he's milking in a four-cow parlor that he designed himself so he wouldn't have to bend over. "You just don't find small parlors anywhere," he says. "So I had to make it myself".

"We have just 100 acres. I'd been raising dairy heifers, but we needed more income than fully stocking with heifers could generate," he explains. "I penciled it out and decided if we could milk cows, it would increase our per acre income," Gassert says.

Gassert's farm had an old horse barn that was in the process of collapsing. "At one time, it was quite a building, but the concrete floor was badly eroded and the foundation was crumbling," he says.

While he was remodeling the barn, he installed a pit for the four-cow parlor. He took measurements for his stalls from a neighbor's bigger parlor and paid a scrap dealer \$0.25 a pound for used 2-in. steam pipe. He used a Makita sawzall and a welder to put the parlor together.

He says he felt the herringbone design would speed up milking since it allows cows to go in and out easily, and he could let out the back cow and refill the stall if the front cow milked out slower. He added feed bunks for the stalls made from 55 gal. plastic drums cut in half.

"In total, I spent less than \$300 on the parlor itself," he says.

He says it was no problem finding an old,



Sam Gassert designed this four-cow parlor so he wouldn't have to bend over.

useable bulk tank. After checking with the local cooperative where he intended to sell his milk, he bought a used automatic pail milker with a dumping station.

"We're now milking 21 cows in just under an hour," he says. He's established an intensive grazing program to get the most feed per acre from his small farm, although he needs to buy grain and protein supplement. "Some of my fields need better drainage before they can be put into use this way," he notes. Once he can get drainage installed, though, he figures he'll be able to increase his herd without having to buy forage.

Contact: FARM SHOW Followup, Samuel Gassert, 3515 County Route 6, Hammond, N.Y. 13646 (ph 315 375-4318).



Randy Thompson's machine is equipped with a stainless steel, hopper-bottom fertilizer mixer tank. Infrared sensors help fertilize two rows of trees at once.

Electronically-Controlled Tree-Fertilizing Trailer Outperforms Eight Human Workers

When fertilizing plantation or nursery trees, you can broadcast or inject materials between the trees and hope the roots extend far enough to pick up the nutrients, or you can do what Randy Thompson does and apply fertilizer close to the trees where you know the roots can find it.

Of course, putting fertilizer in just the right spot can be difficult and time consuming. Thompson, who raises fast-growing Paulownia trees, says most growers hire people to do the job. He built a machine to do it.

"A crew of eight people, applying about 1/2 lb. of fertilizer per tree, can cover about 10 acres a day," he says, noting that for best results, Paulownia trees need fertilizer three times a year. Thompson knew he couldn't fertilize his trees by himself in a timely fashion, and he was reluctant to hire a crew to do it, so he went to work on a machine.

Paulownia trees are planted in rows 12 ft. wide, spaced 12 ft. apart in rows. What he wanted to do was fertilize two rows of trees at once.



Charles Ballinger built this low-cost machine shed out of two salvaged gas tanks and a liquid fertilizer tank. The three 12-ft. dia. tanks are butted together end to end.

Machine Shed Made Out Of Fuel And Fertilizer Tanks

Charles Ballinger of Atlanta, Ill., and his son Charles Jr., built a low-cost machine shed out of two salvaged gas tanks and a liquid fertilizer tank.

The shed measures 13 ft. wide by 33 ft. long and is 12 ft. high. The three 12-ft. dia. tanks are butted together end to end.

The Ballingers split one side of the tanks and welded the cut edges to railroad rails. They used come-alongs to spread the tanks apart. They left the bottom in the end tank to form a back wall.

The tanks are made from heavy gauge metal and don't need additional interior support. The tanks had to be cleaned out thoroughly before cutting began.

"My wife thought I was crazy when I tackled this project, but I think it looks pretty good even if I did build it myself," says Ballinger. "I use the shed to store several tractors. It was quite a job and I used up a lot of welding wire. I used my Hesston stack mover to haul



Ballinger left the bottom in the end tank to form a back wall.

the tanks to my farm. After I put it together in my 40 by 40-ft. shop, I tried using my Allis-Chalmers 7060 tractor to pull it but it couldn't move it. I ended up using a D7 Caterpillar to do the job."

Contact: FARM SHOW Followup, Charles Ballinger, 1798 2250th St., Atlanta, Ill. 61723 (ph 217 648-2660).

He started with a single-axle dual-wheeled military surplus trailer - the kind used behind 2-1/2-ton trucks. He removed the truck-type ring hitch and added a clevis-style hitch so he could fasten it to the drawbar on his tractor.

On the trailer, he mounted a stainless steel hopper-bottomed fertilizer mixer tank. He wanted to use stainless steel augers to distribute the fertilizer out each side of the tank, but found that a pair of augers would cost \$3,000. After an extensive search, he found some at a feed store which had been special-ordered for a customer who later changed his mind.

Each auger has its own hydraulic drive motor, so it can run independently of the other. That way, he can fertilize a tree on one side without dumping fertilizer out the other side. However, Thompson needed a way to turn the augers on and off.

With the help of the Rural Development department at the Ag College, Tifton, Georgia, he found an electronic system that uses infrared sensors to "see" the trees and turn the augers on and off.

"They helped me design the system and ordered the sensors and controllers for me," he says.

"I'm not putting on a lot of fertilizer per tree, so the augers are only on for about .35 seconds per tree. I can run down between

the rows at 4.5 mph, with the augers constantly clicking on and off," he says. "Obviously, there's no way I could go this speed if I had to control the augers manually."

Thompson says one person can fertilize 4.5 acres an hour with his system. In an eight-hour workday, that's 36 acres, in contrast to the 10 acres of trees an eight-person crew can do in the same time.

Except for the electronic technology, the trailer was relatively inexpensive. "I paid \$425 for the trailer from a local salvage yard. It's built heavy enough to handle the load, and the 12-ply tires on it were in good shape," he says. He paid \$125 for the tank. And his good fortune in finding the augers helped keep the cost down. The sensors and controllers, however, made it a bit more costly.

Originally, he pulled the trailer behind a tractor with limited hydraulics, so he installed two hydraulic pumps on the trailer, too. "The pumps are still there, but I'm using a newer tractor on it, so now we can hook directly into hydraulic remotes," he says.

He says the technology could be used for any widely spaced crops, such as in tree and shrub nurseries or in tree fruit, berry or nut production.

Contact: FARM SHOW Followup, Randy Thompson, 8794 Denham Road, Sycamore, Ga. 31790 (ph 229 831-4795; E-mail: dianet@surfsouth.com).