

“Boar Bot” is designed to control the boar during artificial insemination and can lead or pull the boar virtually anywhere in the barn.

Robot For Hog Producers

There’s been a lot of talk about cow-milking robots in recent years. Now a South Dakota company has introduced a robot for hog producers.

The “Boar Bot” is a 4-WD remote control robot designed to move boars around any hog gestation or farrowing building. It measures about 19 1/2 in. wide and 30 in. high and weighs just over 500 lbs. It’s driven by a pair of high torque 24-volt DC electric motors and is geared to travel at 1.6 ft. per second, which is a slow walk for most animals.

The unit is designed to control the boar during artificial insemination and can lead or pull the boar virtually anywhere in the barn. The sight of the boar stimulates the sows, allowing you to tell which ones are in heat and therefore ready to be artificially inseminated. The unit guides the boar by means of a tether attached to a harness that’s fitted on the boar. A handheld transmitter is used to steer the unit left or right and forward or backward.

The idea was the brain child of Jerome Mack, a Leola, S. Dak., hog producer who wanted a way to move boars without the help of others. He went to South Dakota State University, where three ag engineering students designed the unit. They won first place in a senior design contest at SDSU. They also took second place in the national design conference of the American Society of Ag Engineers. Mack then formed his own company and now manufactures the unit.

“It reduces labor and makes handling boars a much safer job,” says Mack. “Once the boar is attached to the Boar Bot, workers can

always stay a safe distance from the boar. It has a surprising amount of power and can pull a 500-lb. boar with no problem. It steers like a skid steer loader. A guard on top of the unit keeps the boar from jumping over the top. I came up with the idea because I found that handling the boar was inefficient and at times unsafe. The job took two or even three people – one or two to lead, position, and handle the boar followed by an artificial insemination (AI) technician. I wanted to turn that process into a one-man operation. With the Boar Bot, the AI technician can move the boar by himself.”

Two 12-volt deep cell batteries are used to power the two 24-volt motors for up to eight hours of continuous use. On-board chargers keep the batteries fresh whenever you’re not using the Boar Bot.

Several attachments are available for the Boar Bot. A “boar hearse” is used to haul dead animals out of the building. It winches the animal vertically up against a pair of tall plastic boards. A power broom is designed to be pulled behind the Boar Bot and can be used to sweep feed into the trough. A pair of levers on back are used to raise or lower the machine in order to get the correct downward pressure on the broom.

The Boar Bot is sold in two models: The 500-lb. model which sells for \$5,250 and a 375-lb. model that sells \$4,999.

Contact: FARM SHOW Followup, Swine Robotics, Inc., 10858 365th Ave., Leola, S. Dak. 57456 (ph 605 439-3227 or 3510; fax 5305).

One-Wall Bunker Simplifies Silage Storage

Chris Judd knows a bargain when he sees one. So when a construction company started rebuilding a local highway, he paid close attention. “They chipped off the asphalt and needed a place to dispose of it. I had them bring in enough to cover about an acre.

“The chipping process heats up the asphalt and it was still warm when the trucks dumped it in the yard. We leveled it with a skidsteer and packed it with a tractor. Then I had it surfaced with new asphalt.

Once the yard was paved, Chris set some pre-cast bunker sections which he had also obtained cheap—along one edge of it. He didn’t have enough walls for both sides so it was a one-walled bunker.

To form a second wall, he uses a 10-ft. dia. plastic bag stuffed with silage. “We use

Ag Bags for a lot of feeds. The paved yard is a great place to put them. I place one of the bags parallel to the bunker wall and we fill the area between with corn silage. I can make the silo as wide or as narrow as I want this way,” he says.

One of the best features of this one-walled bunker is he can start filling his bunker while still feeding out of it. “I start filling at the opposite end of the silo from where the previous year’s silage is stored,” he explains. “That way, I can make new silage while feeding up all of the old silage.”

Contact: FARM SHOW Followup, Chris Judd, Box 629, Shawville, Quebec J0X 2Y0 Canada (ph 819 647-5966; E-mail: gcfeeds@cmw.ca).

Front-End Loader Fitted To Back Of Jeep

Steve Cox wanted to put a front-end loader on his 1955 Allis-Chalmers B tractor. He found a loader that had been mounted on a 1949 AC “B” but it was too wide to fit his tractor.

That’s when a friend of his mentioned that he had just fitted a front-end loader to the frame of a 4-WD pickup. Cox searched all over the state for a 4-WD that would do the job and finally found a 1978 Jeep Cherokee for \$100 in Maine that would work.

“It had enough width and was the correct height off the ground. I realized that if I put the bucket on the back, the engine and front end would act as a counterweight,” says Cox.

He cut the jeep off right behind the front seat and then reinforced the frame and installed new leaf springs.

To mount the loader to the frame, he had to modify the loader slightly. He used a kid’s swingset to hold the loader and backed the jeep under. He bolted an I-beam across the jeep’s frame behind the seat and bolted angle iron from that to humps in the frame over the rear tires. With a little welding and bolting here and there, the bucket was mounted solidly to the frame.

For hydraulics, Cox was lucky that his neighbor worked for a company that makes hydraulic lift platforms. He bought two new Prince hydraulic cylinders for \$79 each and found a 12-volt hydraulic pump to run the system for \$50. But the pump was too slow so he installed a belt-driven pump that runs directly off the engine.

The final task was building a hydraulic reservoir. Cox works at a shop that uses heat-treated heavy aluminum sheets so he was able to obtain some end scraps to weld up a square 10-gal. tank. He also made a baffled 25-gal. removable gas tank that he can take off and haul to the gas station, since the jeep

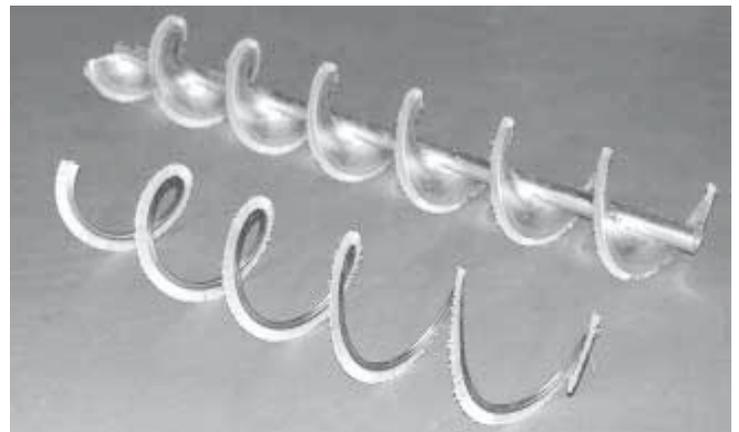


Steve Cox mounted a loader on a 1978 Jeep Cherokee. He cut the Jeep off right behind the front seat and then reinforced the frame and installed new leaf springs.

is not street legal. “Having the gas tank mounted on the truck bed and not underneath makes it easy to remove it if I ever need to do more welding on the truck,” he notes.

Once he had it finished and started digging with the bucket, he realized he had to stiffen up the rear end. He took out the rear shocks and replaced them with a piece of 1-in. dia. cold rolled steel inserted into a piece of 1-in. ID steel pipe. “The pipe attaches to the top shock mount and the steel rod to the bottom mount. I drilled four holes into the steel rod and two in the pipe. I use bolts to pin them at different heights, depending on how deep I need to dig with the bucket. The highest setting just skims the ground. The lowest setting digs about 6 in. into the ground,” says Cox.

Contact: FARM SHOW Followup, Steven Cox, 98 Egypt Road, Raymond, Maine 04071 (ph 207 655-3586).



Add-on bristle fighting consists of a coiled poly brush strip mounted on a steel channel.

Make Your Own Brush Auger

Conventional augers can be converted into bristle augers right in your farm shop to reduce seed or grain damage, says Uniflyte, Orion, Ill., which recently introduced a new add-on bristle fighting for grain augers.

The fighting consists of a coiled poly brush strip mounted on a steel channel. It comes with a set of steel clips. You weld the base of the clip onto the outer edge of the auger fighting and then snap the brush into the clip. When the brush eventually wears out it can be quickly replaced by folding the clip back, allowing you to just remove the old brush and snap a new one in.

The brush sweeps the auger tube clean and prevents cracking of seed beans and other

crops, according to the company.

“It saves a lot of time because to make this kind of brush auger conversion in the past, farmers had to send their auger to the factory,” says a company spokesman. “Without the clips there’s no way to weld the channel directly to the auger fighting without melting the poly brush strip.”

The brush strip and steel coiled channel sell for \$2.50 to \$3.50 per coil depending on size. Clips sell for 63 cents apiece.

Contact: FARM SHOW Followup, Uniflyte, Box 249, Orion, Ill. 61273 (ph 800 235-4974; fax 309 526-3278; E-mail: uniflyte@netexpress.net; Website: www.uniflyte.com).