

Driverless Tractor Ready To Be Introduced

Farb Guidance Systems (FGS) is just weeks away from introducing a driverless tractor. The company is assembling its prototype tractor for field testing and evaluation. Once completed, initial orders will begin to be filled. This tractor is expected to be just the first in a series of driverless farm equipment.

"We are a technology company offering a guidance system for the next generation of tractor where no driver is needed," says John Bruce, vice president, Farb Guidance Systems. "Our system will gather information as it goes through the field. We will map the field or use existing GPS maps to identify obstacles and draw a virtual fence around it and them."

Bruce explains that if the tractor crosses a fence, or another obstacle shows up, the tractor will stop. Options for identifying moving or "new" obstacles include radar and LiDAR systems.

"Customers will be able to order the scanning system they prefer," says Bruce. "Once installed, our guidance system sees better than a person can, such as at night or on a dusty day."

While several major agricultural equipment companies have introduced restricted guidance systems for equipment such as grain carts, it requires a person in the field.

"The difference between us and our competition is that we have parts numbers and prices and are ready to deliver to customers," he says. "We use off the shelf engines and drive systems."

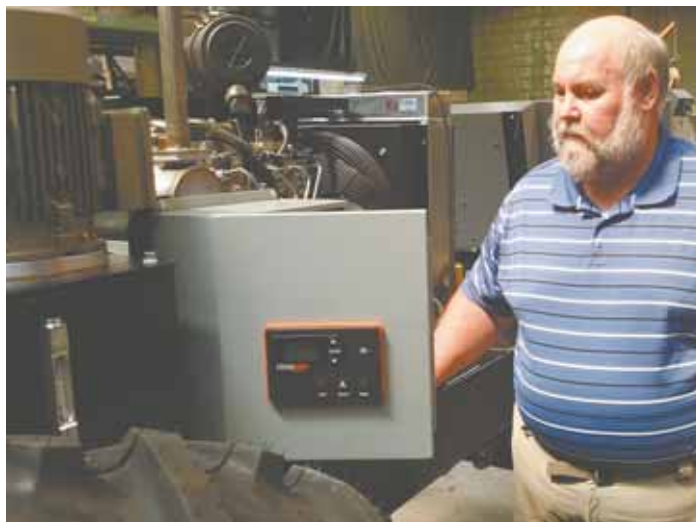
Another difference is the type of tractor it will be. "We'll have no cab, no steering wheel and no operator seat," says Bruce. "We don't want to make equipment. We want to make equipment smarter, and it's the guidance system that makes a tractor smart, not the mechanics."

Bruce says the FGS frees up operators, reducing labor and risk. "Agriculture is the 7th most dangerous industry in the country, and a majority of accidents are due to operator error," he says. "We know we will save lives."

Initially, the company applied its guidance system to a skid steer. Their system can also be installed for use on late model tractors. The prototype being evaluated this summer is the first of a new concept the company is pursuing, truly driverless.

"We have done extensive market research to identify the need and believe the market is poised for this technology," says Bruce.

Bruce suggests that the company has resolved the liability issues that have held back other driverless systems. He adds that



Bill Farb says he's just weeks away from introducing his "truly driverless" tractor. No person is required in the field. "It'll have no cab, no steering wheel and no operator seat," he says.

the company is talking to major brands about licensing their guidance system.

"This technology needs to be in the hands of farmers," says Bruce.

Contact: FARM SHOW Followup, Farb Guidance Systems, 2323N. Hwy. 41, Post Falls, Idaho 83854 (ph 800 327-2375; www.farbgs.com).

Heat Box Keeps Hose From Freezing

JoAnn Dawson doesn't worry about frozen stable hoses at her Fairwinds Farm & Stables. Her heated hose box keeps her barn hose and a portable hose toasty warm all winter.

"The box is mounted to an outside wall and plumbed into the barn bathroom," says Dawson. "A radiator-type space heater at the bottom keeps the hose warm."

The upper compartment holds a 100-ft. hose on a reel, more than enough for Dawson to reach the end of the barn. A removable crank on the reel makes it easy to roll up the hose when finished.

"The crank is removable so it doesn't stick out into the aisle where it could be a hazard to horses," says Dawson.

Hinged doors make it easy to access the hoses. Both doors and the compartments are insulated with foam board to help keep the hoses warm at minimal cost.

Contact: FARM SHOW Followup, Fairwinds Farm, 41 Tailwinds Lane, North East, Maryland 21901 (ph 410 658-8187 or 302 540-1852; jdawson@fairwindsstables.com; www.fairwindsstables.com).



Heated hose box is mounted to an outside wall and plumbed into barn's bathroom. Radiator-type space heater at bottom keeps hose warm all winter.

Auto-Shutdown Added To Older Tractor

William Medley modified his 1020 Massey Ferguson so it automatically shuts down if it has engine problems while running his generator.

"I bought a 10K generator with plans to hook it up to my tractor, but I was worried about the tractor overheating or oil pressure failing if it ran overnight or for long periods unattended," says Medley.

To resolve those concerns, Medley decided to install a safety shutoff. He had used similar setups on water pumps in his job as a heavy equipment mechanic.

"I bought a shutdown solenoid on the internet that is spring-loaded. It cost about \$100," says Medley. "I wired it to the switches for water temperature and oil pressure idiot lights. Low oil pressure or high water temperature shuts down the engine."

The rewiring involved adding a diode between the light switches so they will work separately. If either lights up, the relay kills power to the solenoid, and it shuts down the engine. He also added an override on the circuit to compensate for a lack of oil



Generator mounts on a rolling frame.

pressure. It kills the ground to the relay until the engine starts.

"I recently ran the generator on the tractor for 60 hours," says Medley. "I only shut it off once to change oil."

Hooking up to the generator is fast and easy thanks to a frame with 3-pt. hitch connections. Medley fabricated it mostly with angle iron. Swivel wheels mounted to the bottom make it easy to roll the generator into storage until needed.

Contact: FARM SHOW Followup, William Medley, 1065 Douglas Branch Rd., Elkview, W. Va. 25071 (ph 304 965-5727).



Mineral feeder was made using a 12-in. long piece of 3-in. pvc pipe and two 90-degree elbows. Goats feed out of the bottom open end.

Goats Can't Destroy This Pvc Feeder

A simple homemade pvc mineral or salt feeder for sheep and goats has worked better than other feeders they've tried, says Debbie Chikousky, who blogs and writes articles about her family's Manitoba farm.

She had seen other pvc feeders, but needed to modify the design to fit her barn's smaller, shorter space. She used a 12-in. long piece of 3-in. pvc pipe and two 90-degree elbows and cemented them together.

A cap can be screwed on after adding minerals to keep debris out if necessary. The Chikouskys drilled a hole to run a cotter pin through to goat-proof the cap.

The bottom open end is at the right height and large enough for the ruminants to lick the minerals they need.

"The sheep go to it readily," says Chikousky. "The goats want to break it, but

it won't break. We had one feeder that was a hopper bin that they chewed on the wood. This is more indestructible."

The straight pipe could be doubled in length to hold 10 lbs. of minerals, she notes. And the feeder could be attached to a wall with plumber's tape.

Built just last spring, the feeder has worked well so far. Since goats can't get their feet in the feeder, there is less waste. Plus, the smaller opening prevents urine and feces from getting in the minerals.

Similar, larger pvc feeders could be used to make creep feeders for small lambs and kid goats or for chicken feed, Chikousky adds.

Contact: FARM SHOW Followup, Debbie Chikousky, Box 22, Narcisse, Manitoba Canada R0C 2H0 (ph 204 202-3781; Debbie@chikouskyfarms.com).

Don't Miss The Next Issue Of FARM SHOW

Every day our editors are uncovering exciting new products and farmer-built inventions that promise to save you time and money. Don't miss out! You can tell when your FARM SHOW subscription expires by checking your address label on the front cover. It gives you the date of your final issue (example: 12/1/2016). You can use the order envelope enclosed with this issue, or the order coupon on page 40, to send in your renewal. Or call us toll-free at 1-800-834-9665.