

Fire Ants Get Steamed With This Killing Machine

If you've ever been bitten by a fire ant, you know that having a big colony of them move in is serious business.

John Ebbers, Brookhaven, Miss., and his partner, Dennis Ryan, have developed a machine that puts the ants out of business using hot steam.

"We inject 500-degree steam into the center of fire ant nests at 40 to 50 lbs. of pressure," says Ebbers. "The steam kills the queen, which is all it takes to destroy a colony. Best of all, this method is chemical free."

Ebbers notes that a number of chemical fire ant controls have been removed from the market in recent years. While those products that remain sometimes work, treatment is short-lived.

"Put some chemical on a hill, and the ants are gone, but a few days later there is another hill," he says.

Ebbers says the key is to clean up as big an area as possible. While that might be too expensive with insecticides, it can easily be done with his steam machine. When he first

built the machine he treated every fire ant hill on his cattle ranch.

"They were gone for six months," he says. "By the next year, I started to see a few nests where queens had flown in from other areas. With insecticides, we would have had to be treating every two weeks."

Ebbers and Ryan have invested about \$200,000 and a lot of time in putting together the machine and getting it patented.

Their working prototype was designed to fit on the chassis of a zero turn mower. It includes a water tank, a kerosene tank to fuel the boiler, and a pressurized holding tank for the steam. A computer console controls both pressure and temperature with separate control pads for each.

"It could also be built to sit in a pickup box or on a trailer pulled behind an ATV," says Ebbers.

Although the pressure is kept relatively low, the prototype has a dome that lowers over the anthill before steam is injected. Ebbers says the dome provides an extra level of protection against the steam and pressure. The prototype is also equipped with a wand and hose that attaches to the side of the rig.

"You can stop the vehicle and walk around with the wand that connects to the steam," says Ebbers. "With the wand, you definitely want to keep the pressure down so you pre-



Machine injects 500-degree steam into center of fire ant nests at 40 to 50 lbs. of pressure. The steam kills the queen, which is all it takes to destroy a colony.

vent any possible blow back."

Ebbers and Ryan have used the machine and refined it for the past five years. With full time jobs of their own, they are looking for someone interested in licensing the technology. They would also consider working with a partner to develop the technology. They know the market is there.

"Fire ants are taking over pastures, yards,

church grounds and play grounds," says Ebbers. "With this rig, they aren't there when you finish, and it feels good, too. You can do about 40 anthills in 30 minutes with a 20-gal. tank of water."

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"Big Boy" Tricycle Powered By 1-Cyl. Engine

Harlen Grovom and his friends in the North Dakota Pioneer Association had a great time building a giant 3-wheeler this past winter. It's now a big hit at parades and shows.

Grovom says he bought some scrap iron and a couple pieces of new roller chain, but that was it. Everything else in the giant 3-wheeler was salvaged from equipment on hand.

"The big, spoked front wheel with an 11 by 36-in. tire came from a 1950's combine. The two small back wheels are off a corn planter," he says. "We used some angle iron and metal parts off a drill for the frame, including the front wheel steering spindle. The front forks were made from 2 by 3-in. steel tubing."

The rear wheels are driven by a 1-cyl. LB International 5 hp gas engine. It mounts on a platform between the rear wheels.

"It's an awful nice-sounding engine that just putt-putts along steady," Grovom says. "It travels at the speed of a fast walk, which is ideal for parades. The engine speed is preset before you get seated, and the hand-controlled clutch and gearshift are located to the left of the seat. There's also a brake pedal on the right, near the foot rest."

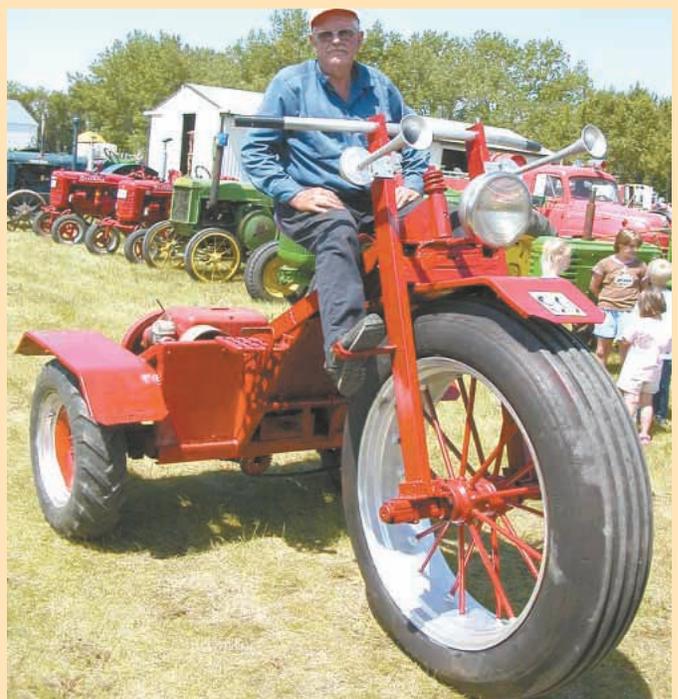
The tricycle is fitted with an auto transmission and the rear end and hydraulic brakes out of a pickup. Grovom uses a belt tightener as the clutch and installed a cover over the chains and transmission for safety.

Foot rests welded half-way up the front forks supply the "power steering." The giant steel pipe handlebars measure 4 ft. across.

He says a driver can easily mount the unit because of the platform and another step up to the old F20 International tractor seat. "Getting off is a little trickier - you have to pay attention," he points out.

Grovom painted the rig red and added accessories including a big headlight from an old truck, and two used electric trumpet horns, to make it parade-ready.

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Giant 3-wheeler is a big hit at parades and shows. The big, spoked front wheel has an 11 by 36-in. tire off a 1950's combine. The two small back wheels are off a corn planter.

