



1941 Farmall H repowered with a Predator 212cc engine.

## Farmall Powered By A 212cc Engine

When Chris Floerkey, Danville, Ala., needs tractor power on his 10-acre hobby farm, he fills the tank with less than a gallon of gas and pulls the cord to start the Predator 212cc engine on his 1941 Farmall H tractor.

"It's real slow (5 mph) but has amazing power," he says, noting he's used it to pull a disc, trailer, and hay wagon and for pulling up stumps.

Floerkey's first project was installing the engine, which he bought from Harbor Freight, on a golf cart. At \$100 (a couple of years ago), the price was right, and it gave Floerkey the idea to put the same engine in his grandfather's Farmall H tractor. He'd brought the tractor home from Indiana 10 years earlier, but the engine block was cracked and too expensive to repair or replace.

"What made it ideal is that some Farmalls

are held together by the engine, but the H has a subframe of channel iron," he says, so the engine isn't needed.

"The heart of the project is the eye of the clutch, so I bought a clutch disc and cut the center out. I also bought a 1-in. shaft coupler and a friend with a machine shop welded them together for \$40. That allowed me to extend the transmission shaft to the 1-in. keyed shaft. The only trick was to line up the old stuff to the new stuff," Floerkey explains.

He figured the 212cc engine would work in the H because the tractor's original engine was small with 24 hp. and 1,600 rpm's. Though the new engine is only 6.5 hp., it runs at up to 3,600 rpm's. He used a large 84-tooth sprocket on the new shaft to make up for horsepower with increased gear ratio. He wasn't sure if No. 40 chain would be



Photo Courtesy Of Small Farmer's Journal

Electric winch powered with 12-volt batteries and pulleys are used to lift bales.

## Electric-Powered Round Bale Mover

Brad Mummery of Manitoba, Canada, designed a "no hydraulics" electric round bale hauler that he can use behind any vehicle.

He credits the idea to his friend and mentor Wes Ferguson, as Mummery purchased his original hay spike from him and further improved on the design. The trick, he discovered, was making sure the spike was balanced properly to handle large bales.

To use, Mummery lines up the spike and then backs the horse team until the spike is buried in the center of the bale. He uses a 3,000-lb. minimum electric winch with two 12-volt car batteries and geared down pulleys to lift the bale in less than a minute. He's also added a solar panel to his own spike so it can be charged on the go.

Mummery uses this device to haul bales from across his fields and place them in rows for a semi to pick up. The spike works to lift

a bale up on its end to remove the strings and put a feeder over it. It also serves as an opportunity to train horses to back up, gee, and haw.

On his farm, Mummery typically relies on heavy horses to haul bales and can handle a maximum of about 60 1,200-lb. bales in one day, averaging 10 to 12 bales per hour. (With light horses, he can haul up to 45). The reason this record isn't higher is that the batteries on the electric winch eventually wear down and require recharging, which can prematurely end the workday.

Mummery says anyone with a welder and basic metalworking skills could follow his design for an economical round bale mover.

*No contact information available, original article found at <https://smallfarmersjournal.com/round-bale-mover/>*



Predator 212cc engine has 6.5 hp. and runs at 3,600 rpm's.

enough, but it's worked well for a couple of years. The total cost for getting the Farmall H running was about \$400.

The Predator 212 Tractor post on his YouTube channel, Keyfarm, shows how he rigged up the engine. It has inspired others to use the 212cc engine in other projects.

A gallon of gas lasts about 3 hrs. on half throttle and the tractor does everything he's needed to do so far.

The biggest shortcoming is that it doesn't have enough rpm's to run a pto for most equipment, and it's slow.

Floerkey, who also tinkers with remote control, figures he has a solution for that.

He plans to add an 18-hp. DuroMax engine and pto shaft on the back of his 1992 Mazda pickup that also has a 212cc engine. The plan is to pull the bushhog with the truck. After that, he plans to upgrade to an 18-hp. engine on the tractor.

"My goal is to have a video of me sitting in the shade with my tractor bushhogging by remote control. So, stay tuned," he says.

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## She Makes Stains Out Of Waste Oil

With the price of paints and stains climbing astronomically, this idea from Milan Lacika in Houston, British Columbia, could be a real money-saver.

"I made my own stains from waste oil to protect unpainted wood fences, gates, and buildings by combining 1 gal. of any exterior oil-based paint with 4 gal. of waste oil, and then adding 2 to 3 times the recommended amount of Japan Drier additive to the mix (available at most paint stores). You can experiment with the Japan Drier amounts if you want a faster drying time. The waste oil stain can be brushed or rolled on and the finished color will be brown.

"Here's another way to save on the cost of paint. You can make a 'first coat' by mixing any partial cans of oil-based paint together (no matter what color) and diluting with 10 to 15 percent paint thinner and adding the recommended amount of Japan Drier. The color might be awful but since you're putting on a topcoat later, it doesn't matter.

"Another idea is how to change low gloss or flat alkaloid paints to high gloss. Just add 10 to 15 percent of raw (not boiled) linseed oil and the recommended amount of Japan Drier. Linseed oil is also a great preservative for shovels, axes, and other wood handles. Just rub it in with a soaked rag."

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Guide panels swing on sturdy metal hinges while side panels are anchored to the floor and sidewalls.

## Crowd Gate System Helps Separate Hogs

"Loading market hogs at our farm became safer and easier after we built a double crowd gate system inside our finishing barn," says Iowa hog producer Dennis Backhaus. "For several years, we used metal crowd gates that two people held on to and moved forward by hand, but that became too dangerous as the finished hogs got larger. These days the market pigs weigh close to 300 lbs., the size of football linemen, and they have the advantage of 4-legged drive."

Backhaus and his son created a safer and more efficient sorting system that uses a series of 3-ft. tall solid metal panels. They're made of 12-ga. sheet steel welded to a tubular steel frame with a center horizontal brace for added support. Panels on the outside of the sorting system are slightly curved to create a natural funnel that moves hogs toward the chute and never into a corner. Those panels are supported by vertical steel post uprights bolted to the concrete floor.

"The inside of the sorting area has a 15-ft.

long double crowd gate so we can bring in two batches of hogs at one time and keep them in smaller groups," Backhaus says. The gates swing on hinges attached to a 4-in. dia. steel well casing bolted to the floor and supported on top by a bracket bolted to the concrete sidewall. As the pigs move forward through the sorting area, a worker secures the crowd gate behind them by lifting a metal handle and hooking it behind catches on the side panels." Four slam/lock gates at the ends of the system partition off the alleys so once pigs are inside, they can't get out. All panels are positioned 3 in. off the floor so the loadout area can be easily pressure-washed.

Backhaus says he's gotten many compliments on the system because pigs can be moved quietly and safely without any visual distractions coming through the solid panels.

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