## Made It Myself

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## **Double-Framed Grain Drill**

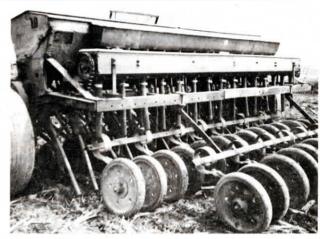
"There's not a grain drill in the world that'll do what mine does. I have essentially done the same thing with a grain drill as manufacturers do to build double-frame planters," says David C. McCoy, Fredericktown, Ohio.

The problem McCoy had was finding a drill that would plant three different crops at once—oats, alfalfa and bromegrass. He says he's learned that his cows have a strong preference for the mix of grass and legume over straight alfalfa.

For several years, McCoy seeded bromegrass together with oats. "It works but as you bounce through the field, the difference in density between the two seeds causes the oats to settle at the bottom, resulting in poor distribution. And when the bromegrass is seeded with the oats, it's a bit too deep so it doesn't establish as

"The only commercial machine I know of that would let me plant three seeds at once is a Brillion Surestand seeder, which you pull behind your present seeder. This would require a substantial hitch on the back of the grain drill, and would cost more money. John Deere used to make an FBB drill 25 years ago that would let you mount an extra large grass seed box on back so that you could plant a small grain, a legume and grass seed at once. Although they're no longer made, I found a used one.

"The drill had no bottom left in the fertilizer compartment and the small grain box was frozen solid. So I removed the large grass seeder and mounted it on my older Deere FBA grain drill, using the frame from the junk drill. I got power to run this additional seeder by changing the fertilizer drive system. It drops the large bromegrass seed down large



rubber tubes onto the ground surface.

"I also mounted the legume box from the junked FBB drill on the back of the drill and centered the drop tubes so they split the 7-in. spacing of the front legume box. I set the front and back legume boxes at half the normal seeding rate. These narrow 3 1/2-in. alfalfa bands reduce the weed competition you normally get between 7-in. bands.

"I also mounted the gang of press wheels off the old drill onto the new drill frame. I set the existing gang of press wheels 3 1/2 in. to the left and attached the new gang 3 1/2 in. to the right. Now I press the alfalfa seeds coming down both sets of drops into the top 1/4 in. of soil, as well as the bromegrass coming from the large grass seeder."

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## Homemade Square Bale Loader Made From Dodge Pickup

Craig Cooper, Adair, Okl., started his own custom bale hauling business using a 1976 3/4-ton Dodge 4-WD pickup that he converted, with a little help and supervision from his dad Terry, into a square bale loader and hauler.

Craig bought the pickup, which was in rough shape, for \$175. Once he got the engine running, he stripped the truck of its cab and body, leaving just the frame and engine. Two feet over the frame he mounted an angle iron framework and put on a 23-ft. long flat bed that extends from the front bumper to 3-ft. beyond the back bumper. A hole cut in the bed provides access to the engine.

He moved all controls—including the steering wheel, brake, clutch and gas pedals, gear shift, and gauges and the driver's seat to the very front left-hand corner of the flat bed.

A 12-ft. hydraulically-powered boom with a bale-grabbing paddle on the end is mounted on the front right hand corner of the rig. It picks up bales as Craig drives through the field. A bale chain carries bales up the boom to a double chain which carries them to the back end of the bed. A 4in. tall raised frame around the chain allows bales to be stacked over the chain and across the entire flatbed.

Craig can load up to 75 bales with the help of assistants who stack them on the flatbed.

Back at the barn, he can unload right into an elevator by reversing chain direction and feeding bales off the wagon, out the boom and into the farmer's elevator.

Terry notes that although the modified pickup can't carry as large of a load as some other rigs,it's maneuverable and handy to drive in and around buildings.

Craig rigged up an engine-driven hydraulic pump in front to run the chains, boom and the fan that cools off the truck's radiator. He also stiffened the truck's front suspension and put overload springs on the back. Overall, he has about \$3,000 in the bale hauling machine.

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## Dryer Heat Exchanger

An Ohio farmer cut his per bushel drying costs with a wrap around heat exchanger he built onto his Farm Fans AB12 grain dryer.

Ken Studer, who farms near Tiro, says the exchanger worked without a hitch in 1986. "I've owned the dryer since 1984. That first year, drying costs were 15 cents per bu., drying down from 25% moisture to 15.5%. LP at that time cost 59.9 cents per gal. Last fall, when I dried corn from 20% to 14.5% at an LP cost of 45.9 cents per gal., per bu. drying costs were 5.2 cents. Under most conditions, I feel I can can reduce total drying costs at least 3 cents per bushel," he says.

The heat exchanger consists of 96 pipes running horizontally the length of the dryer, 48 on each side. The pipes are shrouded by a sheet metal housing. Fresh air is sucked in through the pipes, which protrude

from the end opposite the dryer's 36-in. fan, while hot, moist exhaust air from the dryer flows up around the outside of the fresh air pipes. Atop the horizontal pipes, a series of short, vertically-mounted pipes act as a secondary heat exchange chamber. Moist, hot air exits upward through the pipes and fresh air is pulled in around them. This top chamber was built before the lower part of the exchanger. Studer changed the design for the lower chamber, which he says works best.

A sheet metal housing encloses the entire fan and burner assembly. A full-size door allows easy access for maintenance.

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