# Made It Myself

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## He Runs His Farm On LP Gas

"We haven't farmed with gasoline for more than 5 years and we probably never will again," says Edwin Hanson who runs most of his working tractors and a combine on LP gas. "We bought our first LP-powered tractor in 1974. Now all of the tractors we use regularly run on LP and so does our combine."

Some of Hanson's 15 LP tractors were converted over from gas. Others are factory originals.

"It's a lot cheaper to farm with LP. It costs about half what gasoline does," says Hanson, who raises 160 acres of corn, soybeans, vegetables and hay with his brother Joe near Wyoming, Iowa. "If you're doing lighter work like making hay, for example, the LP tractors use about half the number of gallons of fuel a gas tractor will in a day. If you're doing heavier work, like rotary hoeing or disking, they'll use about the same amount of fuel or a little more."

What's more, because LP burns cleaner than gas, Hanson's tractors require less maintenance and repair than gas-powered models. "Gas tractors burn out valves a lot sooner than an LP tractor," he says. "When you change oil on an LP tractor you can't believe how clean it is compared to oil out of a gas tractor."

The first gas tractor Hanson and his brother converted to run on LP was a 1952 W9 International. The men first separated the one-piece intake and exhaust manifolds by cutting them apart. They rebolted the manifolds to the head, leaving a small space between them so the LP wouldn't burn too hot. They bolted a carburetor off an old International Super M underneath the opening to the tractor's air intake. They then mounted an LP tank off an old Minneapolis Moline W on the W9's drawbar and ran flexible LP hose from the tank to a regulator, which changes LP to vapor as it enters the carburetor. They also tapped into the tractor's cooling system to heat and cool the regulator and regapped plugs for a lower spark to burn the LP properly. "We didn't modify the valves or pistons in any way and we've had no problems," says Hanson

The next tractor the Hansons converted was a late 1950's Minneapolis-Moline 670. They replaced the tractor's original carburetor with one from an old Minneapolis-Moline 5-Star LP tractor, then mounted the 5-Star's regulator on a homemade bracket just to the left of the carburetor. They readjusted the tractor's throttle linkage so the 670, which has a larger engine than the 5-Star, would get enough fuel and mounted an LP tank where the tractor's gas tank had been, ahead of the dashboard. As with the W9, they regapped plugs. "We pull a drag with it and it has plenty of power," says Hanson.

The Hansons next converted a 1950 Farmall H with a used factory conversion kit they bought from a farmer. After installing the kit, they decided the regulator that came with it was too small so they installed a bigger, Century regulator.

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## Home-Built Tractor Great For Blowing Snow

"I've seen a lot of homemade tractors in FARM SHOW through the years, but I've never seen one like the tractor I built, which has live pto for blowing snow," says John Kelly about the 4-WD tractor he built out of scrap parts he had on hand.

The Kincardine, Ontario, farmer's tractor uses the frame, axles and drive train off a 4-WD Toyota Land Cruiser FJ40. It has a 258 cu. in. 6-cyl. engine out of a 1975 Pacer car and the transmission out of an early 1970's GM 1-ton truck with a reversible pto unit and heavy-duty 1 1/8-in. dia. output shaft on it.

"The heart of the machine is the second clutch at the rear of the 4-speed truck transmission," Kelly says. "It drives the Toyota 3-speed transmission with a high/low range transfer case to turn the truck's original 2-WD power into 4-WD power with the Toyota's original 4-WD. The gearing combination lets me do 95% of my snow plowing in second gear on the main transmission and high reverse gear on the auxiliary transmission.

"I get 'live' power for the pto by engaging the pto and working gear on the main transmission and using the second clutch and auxiliary transmission for all forward, neutral and reverse tractor motion without interrupting the operation of the pto."

To make the machine suitable for snowblowing, the pto is geared down with a 3-speed Ford pickup transmission that Kelly leaves in 2nd gear. Kelly's snowblower is built to run at 540 rpm's, instead of the 1,200 rpm's the truck's 4-speed transmission runs at.

Kelly built the 3 pt. hitch mounted on the beefed up rear end himself. "I copied the design for the 3 pt. from a couple of tractors we had at the farm." he says. "It uses common 3-in. dia. by 8-in. long cylinders and is as close as possible to standards for tractors of comparable size hp. It's powered by a 12-volt electric/hydraulic pump."

A 6-ft. wide McKee snowblower mounts on the hitch, as do several other homemade attachments including a trip bucket, a lift boom and a multi-purpose work platform.

Kelly fabricated the hood and fenders for his tractor out of sheet metal. He bought a Meade cab from an Allis-Chalmers 190 and adapted it to fit the tractor.

In the future, Kelly wants to add a governor, better engine driven hydraulics, and power brakes (it has power steering) to the tractor.

"Including the snowblower, I have less than $1,000 invested in the tractor," says Kelly. "I've been using it for four years, doing a route of 20 to 25 driveways and it's been trouble-free. It really works better than I ever thought it would."

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## No-Till Bean Planter

When Robert Weer, Goldsboro, Md., switched to no-till soybeans, he was able to avoid the cost of a new narrow row planter by buying a used Deere 7000 8-row 38-in. planter and converting it to a 14-row 17-in. narrow row planter.

Weer bought the planter at an auction for $4,500. He moved the row units together and added 6 row units off a Deere 7000 6-row planter that he already had.

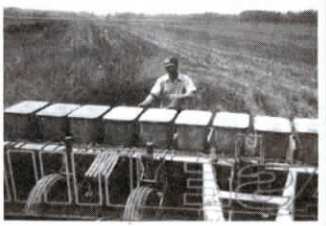
"It was a fairly easy conversion," says Weer. "A comparable new 14-row planter would have cost $25,000 to $30,000."

The 8-row planter had four lift assist wheels on back, mounted between row units. Weer remounted the lift wheel assemblies on front of the planter, adding two more lift wheels to handle the weight of the extra row units. He removed the toolbar that supported the planter's fertilizer disc openers to make room for the lift wheels. The seed transmission on back of the planter was also in the way of the closed-together row units so Weer cut it off. He put a sprocket at each end of the fertilizer transmission shaft, which mounts ahead of the planter, to chain-drive the seed shaft. Each chain drives 7 row units.

"Using the fertilizer transmission to drive the seed shaft works good. I use the original shear pins to protect the row units," says Weer. "However, the seed transmission had a larger selection of gears than the fertilizer transmission has. Whenever I switch to a small seeded soybean variety I slip out the fertilizer transmission shaft, remove the existing gear, and put in a new one so that I don't have to slow down.

"Mounting the lift wheels up front reverses the pressure on the tongue - when I raise the planter, the wheels pull up instead of down on the tongue so that it wants to raise the back end of the tractor. The 17 seed hoppers each hold 1 1/2 bu. and the planter has cast iron closing wheels so the tongue puts a lot of pressure on the tractor. I mounted weights on back of the tractor in order to counteract the pressure. I use a 90 hp tractor to pull the planter. It does the job, but I could use a 100 hp or larger tractor to handle the reversed tongue pressure.

"I've used it for six years. Until last year, I used my 6-row planter to plant corn. When I finished planting corn I removed the row units and mounted them on the 8-row planter so that I could plant soybeans. However, I didn't like wasting time switching row units when I could be planting soybeans so last year I bought six used row units for the 7000 planter. Now I have separate planters for corn and soybeans. I paid $750 for each of the row units and rebuilt them to like-new condition.



"My 14-row planter has a rigid frame so I can't fold it for transport. However, most of my land is in one block so I seldom need to drive the planter on the road anyway. The narrow 17 in. rows help shade out weeds quickly. I had been drilling soybeans on 7-in. rows, but I think I can do a better job on our sandy soil by not tilling the ground and conserving organic matter and soil moisture."

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