

State-Of-The-Art Combine Sprayer Saves \$60,000 To \$70,000

When Ken Soda checked out the cost of a new 4-wheel drive self-propelled sprayer a few years ago, he decided his 1,200 acres of cropland wouldn't cash flow the rig. So he enlisted his sons, Kevin and Steve, to help him build one. A few months and about \$15,000 later, the Princeton, Wisconsin farmers had a 4-wheel drive sprayer with a 60-ft. boom, complete with foam markers. A Raven monitor, that by itself cost \$3,300, completed the package. Overall, Soda figures he saved \$60,000 to \$70,000 over the price of a comparable commercial unit.

No stranger to home-built units, Soda and his sons knew what they wanted. They looked for and found a New Holland 75 combine. Several things drew them to the New Holland, recalls Soda.

"The cab was nice and roomy," he says. "Also, we wanted something that was center-mounted. Comparable Deere combines have cabs mounted to the side. Also, the New Holland had the same hydrostatic drive as the 6620 Deere, but it was cheaper. Green paint always costs more."

Soda pulled off the engine, fuel tank, lights, hydrostatic drive, front and back axles and wheels, as well as the cab and hydraulic units. Most everything else was scrapped out. The new sprayer was then designed from the ground up, beginning with two 20-ft., 3/8-

in. thick, 4 by 6-in. box beams. The combine's optional drive rear axle was attached to the front of the beams to lead and steer like a tractor with the main drive axle attached at the rear. The 28L drive wheels were replaced with narrower and higher 18 by 42's for easier travel between the rows.

The cab was repositioned at the rear of the unit over the diesel fuel tank, but just ahead of the 3208 Caterpillar engine. A new 1,000-gal. stainless steel tank was mounted in front of the cab with the new 60-ft. boom ahead of that. The hydraulic unit that previously lifted the header was installed to drive the pump. Soda revised the drive pulley so it would run directly off the engine and to the axle below the engine.

Catwalks were mounted on each side of the tank and new ladders built and mounted for ease of access from the rear or front of the unit. A sheet metal cover, heavy-duty enough so it can be walked on if necessary, was mounted over the engine. The high power lights from the combine were retained and remounted for night work.

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To build their 4-WD sprayer, the Sodas started with a New Holland 75 combine.



Sprayer is fitted with a 1,000-gal. stainless steel tank and 60-ft. boom.



To build his self-propelled rotary mower, Balmer mounted the header from a pull-type 12-ft. Hesston Hydra-Swing Discbine on a Hew Holland sicklebar Haybine.

Dairyman Built 12-Ft. Self-Propelled Rotary Mower

When Robert Balmer's 1495 New Holland Haybine was destroyed in a fire, he decided to replace it with a self-propelled rotary disc mower.

The problem was that it was 1994 and there were no big rotary disc mowers on the market at the time. So he decided to make his own.

First, he located a self-propelled 1495 New Holland sicklebar Haybine. It was in good condition.

For a header, he bought a brand new pull-type 12-ft. Hesston Hydra-Swing Discbine.

He replaced the engine in the 1495 with a rebuilt engine from a 466 IH tractor. "I have the pump turned down about as far as it will go, and it still has plenty of power," he says.

Most of the parts on his machine were off the 1495 cutter. The header, though, was brand new. "I never went to the field with the Hydra-Swing," he says. "The only reason

I bought it was to use the cutting discs.

"When I put the head from the Hesston cutter on the New Holland machine, it fit just like it belonged there. I didn't have to do anything to make it fit," he says.

He used the lift cylinders from the Hesston Haybine to raise and lower the head. To engage the cutter, he incorporated a clutch housing from a 915 IH combine.

"Everything went together so well, I went right to the field with it. I didn't even repaint it, so it still looks like parts from two different machines," he says.

Balmer has used his cutter since 1994 to cut his own 150 acres of hay and a few acres of custom cutting, too.

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Drawbar is fitted with two short cylinders that move hitch 9 in. to either side.



Unit attaches to underside of any drawbar with five heavy bolts.

Hydraulic-Controlled Drawbar Swings 18 In. From Side To Side

When a customer walked into Merle Miller's machine shop in Odebolt, Iowa, complaining about the difficulty of keeping his pull-type sprayer on the row on hillsides, Miller decided to try to find a way to solve the problem. The result was a new hydraulic-controlled drawbar that works so well he put it on the market.

The new-style drawbar is fitted with two short cylinders that move the hitch 9 in. to either side. The drawbar simply attaches to the underside of any drawbar with five heavy bolts. It can be removed when it's not needed.

When pulling equipment on a slope, you simply shift the hitch to the upside to compensate for downward drift.

The hitch is built from heavy 3/4-in. plate steel. The drawbar is made of 1 1/4-in. plate. Miller is working on an even heavier unit for pulling extra-wide equipment behind big

4-WD's.

What's more, Miller has developed an automated hitch system that automatically shifts the hitch from side to side by reading the level of the slope. "It's the first automated guidance system for pull-type equipment," he says. A level switch mounts in the cab. It controls an electro-hydraulic valve mounted on the hitch that shifts the drawbar back and forth. A light bar in the cab tells the operator where the hitch is at any given time. Miller has a prototype in the field and plans to complete testing this year and have units on the market early in 2001.

His current manually-adjusted hitch sells for \$1,295.

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