"Unroller" pulls round bales apart and conveys them into a conventional small square baler.

"Unroller" Turns Big Round Bales Into Small Square Bales

"We raise 250 acres of hay each year and also do custom baling for others. We sell most of our own hay to horse owners who prefer small square bales. The problem is that we use round balers in the field because they're so much faster and require less labor. That's why we came up with this unroller," says T. Whipple Simpson and his son, Henry, Cochran, Ga.

Last year Simpson used his invention to unroll 7,000 big round bales, making a total of 140,000 small square bales with his stationary baler.

"It lets us make small bales when we have more time. It's the perfect solution for any hay producer who wants to bring in the crop fast but needs to supply his market with square bales," he notes.

In addition to hay, Simpson also uses the unroller on straw bales. He says he generally only has a 3 to 4 week window to harvest straw so he brings it in as fast as he can and then converts the round bales to small bales later.

Simpson made his original unroller using all salvaged parts from discarded equipment. It took several years to get the design right. Power is provided by tractor hydraulics and the pto.

The unroller consists of three conveyor units that unroll the bales and then fluff up the hay or straw before feeding it into the baler.

"It takes only five or six minutes from the time we load on a round bale until we've got the square bales on the truck. The great thing is that we can double the value of a big round bale by rebaling it. And we can do the work when we have time," notes Simpson.

He says all components on his unroller are standard off-the-shelf parts. You can use any commercial square baler with the unroller. It generally takes 3 people to run the unroller at full capacity. One person with a front-end loader puts bales onto the machine and cuts the twine off.

A second person runs the hydraulic levers that control the unrolling operation. All functions are reversible or can be stopped instantly.

The third person does all the stacking of square bales onto trucks or trailers. Simpson built a conveyor to make this easy. It rolls back and forth on a telescopic extension so the bales simply fall off the conveyor at the feet of the operator on the truck or trailer.

Simpson showed off the EZ Unroller for the first time at the Sunbelt Show in Georgia this fall. He has already sold six units by word of mouth. A single unrolling unit, which is powered by tractor hydraulics, sells for $17,000. A double unit, with it's own 50-hp. engine and self-contained hydraulics, sells for $40,000.

Contact: FARM SHOW Followup, T. Whipple Simpson, Simpson Farms, Rt. 2, Box 247-F, Cochran, Ga. 31014 (ph 912 934-7863).

Rig lets the Simpsons make round bales fast in the field, then later convert them to small bales when they have more time. The small bales are preferred by customers.

Charlie Zanker started with a 1971 Deere 7100 Turbo combine and ended up with this sleek-looking "SprayBine". It's equipped with a 1,000-gal. tank and 60-ft. boom.

FARMER SAVES $90,000

Self-Propelled Sprayer Built From Combine

The first thing people say when they see Charlie Zanker's sprayer is, "You built this from a combine?"

The cab looks familiar, but Zanker's "Spraybine" is not your typical combine-to-sprayer conversion, although the Hamburg, Iowa, farmer did indeed start with a combine - a 1971 Deere 7700 Turbo. "It looks like it came from a manufacturing plant," says Richard Spiegel, Watson, Missouri, who alerted FARM SHOW to Zanker's sprayer.

Zanker equipped the combine with a 1,000-gal. tank and 60-ft. Century boom from a trailer sprayer.

"I bought the combine from a neighbor right out of the field after harvest," he says. "I knew it was in good shape and figured it would fit my plans."

Zanker designed the conversion, but the work was done with help from his father, Paul "Slim" Zanker and father-in-law Kay "Tator" Simpson. The elder Zanker is a retired farmer and Simpson is a mechanic with 17 years experience in servicing Deere equipment.

They scrapped most of the combine's components, keeping only the engine, final drive, cab and a few other bits and pieces.

They built a new ladder-type frame, sized to handle the cab, engine and tank. The combine cab is mounted up front. The spindles from the rear steering wheels of the combine were mounted up front under the cab in an axle made of 4 by 4-in. sq. tubing.

For a better ride, Simpson and the Zankers incorporated the front springs from an early '70s International 1600 truck.

They replaced the original combine seat with the operator's seat from the same truck. Because Deere combine cabs are integrated with the construction of the combine, they also had to add a cab floor and part of the back.

The engine mounts on the frame between the cab and sprayer tank. There are walkways on both sides of the engine and along the tank for access and service work.

The drive axle from the combine is attached to the frame so it's just behind the center of the tank. The belt drive system from the combine fits neatly under the tank.

Zanker used the boom hangers from his old sprayer to mount the boom.

Reworking the drive components was the most difficult part of the conversion. The bell housing on the combine engine had to be revamped and the shaft that drives the pulleys on the combine had to be shortened and re-machined so it could drive the hydrostat on the sprayer. Zanker got the help of a couple of machinists to get the shaft work right.

Simpson went through the final drive and rebuilt everything. They also doubled the size of the hydraulic reservoir and redid much of the hydraulic system.

"After we got it all together, we kept having hydraulic problems. At one point, the pressure built up so great that it split the pump. We finally solved that problem by replacing the spool valve," he says.

To make it into a row crop machine, they also had to get rid of the combine's wide, low tires. "I had new wheels built to fit the hubs and we fitted those with 13.6 x 38 narrow tractor tires," Zanker says.

He replaced the front tires with 14.9 x 24s, the same size as on the steering wheels of his 9500 Deere combine. "I figured we could swap them that way, if we needed to," he says.

One feature that farmers often comment on is the swing-away sprayer control panel they built in the cab. "We put the sprayer controls and monitor on a hinged panel that swings up by the steering wheel so I have quick, easy access to it when I'm spraying. When I'm not spraying, it swings away and locks in place on the side of the cab," he explains.

Zanker paid $2500 for the combine. After that, the new wheels and tires on the final drive were the single biggest cost he incurred. "Those were about $1500," he says. If you add in the cost of metal and machining and the $7000 he paid for the sprayer, the price tag for the new sprayer is still under $14,000.

"I looked at a two-year-old Deere self-propelled sprayer at a dealership recently. The price on it was $104,000, and I'd say mine will do the same thing," he says. "Besides the way it looks, the main difference is the Deere sprayer has adjustable wheel width. Mine is fixed at 120 in., but it works fine on my 30-in. rows."

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