

Hitch Pulls Two Balers At Once

"It lets one man do the work of two or more. I'll never make hay again without it," says Chuck Hainsworth who built a hydraulic-powered hitch to pull two Deere small square balers behind his Deere 4440 2-WD tractor. The frame of the hitch doubles as a hydraulic oil reservoir for the pump used to drive the hydraulic motors on each baler.

The 25-ft. long, self-contained hitch is equipped with a hydraulic-driven steerable rear axle. Hainsworth displayed the hitch at the recent Empire Farm Days Show near Seneca Falls, N.Y.

He uses the patent pending hitch to pull a 347 baler and a 348. He made more than 100,000 bales with it this summer.

One baler is positioned directly behind the tractor while the other mounts off to the right. The bridge hitch goes up and over the first baler to the second baler. The steerable back axle is designed to run at an angle. Both balers are powered by 50 hp hydraulic motors which direct-drive the flywheels.

The hitch mounts to a ball on top of a home-built assembly that attaches to the tractor's 3-pt. The front baler hooks up to a drawbar at the bottom of the hitch. A 2,500 psi, pto-driven pump mounts at the center of the front hitch assembly. The 50 hp motors mount on each of the baler's input shafts. Hainsworth removed the pto driveshafts from both balers and put the motors in their place.

No modifications were necessary to power the balers hydraulically.

The operator hydraulically swings the second baler right behind the first one for transport.

"The more I use it the more impressed I am with it," says Hainsworth. "I built it because I figured it was cheaper to build the hitch than it was to buy a tractor and hire someone to operate a second baler. I can actually bale more than twice as much hay per hour as a single baler because there's less time lost traveling on headlands. I can easily cover 10 acres per hour, compared to four acres per hour for one person pulling a single baler. On heavy first cutting hay I can make more than 750 bales per hour. One time I made 5,500 bales in only seven hours. The steerable rear axle lets me bale windrows that are up to 15 ft. apart. And because the balers pull in line, road transport is easy.

"The hitch does away with drivelines and driveline slip clutches, which always require a lot of maintenance.

"One nice feature is that I can use a tractor equipped with a 1,000 rpm pto to operate both balers, instead of needing a 540 rpm pto. The tractor's hydraulics are used only to steer the rear axle and to swing the tongue on the rear baler in or out. If the front or rear baler were to break down during the day either one can be unhooked in minutes and I



Hainsworth uses his hydraulic-powered hitch to pull two Deere small square balers behind his Deere 4440 2-WD tractor.

can continue to operate with just one baler, front or rear, with no problems.

"I mounted a bumper bar just ahead of the steerable rear axle so that when I'm making a turn or going around a corner and a bale comes out of the front baler, the bar will push it off to the side so that it won't get in the way of the rear steering axle. I mounted a tank on top of the hitch for applying liquid hay preservatives with both balers."

Hainsworth recently began manufacturing the hitch. It sells for about \$24,900. Options include a longer beam for an extended reach and individual hydraulic shut-offs for each baler. A video is also available.

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Manure Spreader Converted To Spinner-Spreader

Ken Soda produces about 1,000 tons of compost a year on his Princeton, Wis., farm. Worth its weight in gold, Soda had to find a way to get it onto his fields. Standard manure spreaders could not handle the fine, crumbly material.

Soda's solution was to take his standard Farmhand spreader into his shop and strip away all drive shafts, beaters and drive gears. He left the apron in place, but removed the beater.

He then mounted a row of four tires across the back of the box to act as spinner-spreaders. The tires mount on a frame made of heavy 4 by 6-in. angle iron that bolts to the frame of the spreader.

A flat plate bolts to the top side of each wheel rim. Four pieces of 3-in. angle iron are welded to each plate to form the paddles.

The wheels mount on hubs spaced just far enough apart that the tires touch. The first hub on one side is powered by a hydraulic motor. The other wheels spin freely.

A second hydraulic motor was attached to

the apron, providing independent speed control.

The final touch for Soda was to mount a replacement for the original beater. "I needed a beater bar that would just tickle the bank of compost or other dry material as the apron moved it toward the spinners," says Soda. "I wanted it to sift down evenly across the spinners."

To provide that even flow, Soda welded steel rod "fingers" to a steel shaft and powered it with its own hydraulic motor for adjustable speeds. The mounting plate allows the original beater to be quickly and easily remounted should Soda wish to use the spreader for manure as it was intended.

"We get a 16 foot pattern with the spinners," says Soda. "It works for lime as well as compost and could handle anything of a similar consistency."

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Soda mounted a row of four tires across back of box to act as spinner-spreaders.



A flat plate bolts to top side of each wheel rim. Four pieces of 3-in. angle iron are welded to each plate to form paddles.

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