He Doubled His Output With Twin Baler Hitch

Building a hitch that can pull and power two balers behind a single tractor just made sense to Dwayne Archer. "We were using large farm tractors and I figured a good operator would be capable of running more than a single baler," he says.

Archer could have gone to a single large baler, but his export market demands small squares from his 1,500 acres of timothy hay.

Pulling two balers is the easy part. Powering them and designing a hitch that would let the operator control them individually were the tough parts. To figure it out, Archer turned to two specialists, a fluid power engineer and an electronics engineer. Even with their help, it took several years to complete.

With three years of field use under his belt now, he knows the investment was worth it in labor savings and more efficient use of equipment. It does everything he wanted and more. In addition to baling, the hitch is also used for raking and turning swaths.

"It can handle multiple swath widths and move quickly from field to transport," says Archer. "I can go from baling to rolling down the road in less than three seconds with the baler trailing directly behind the tractor."

The hitch hooks to the tractor's 3-pt. hitch or a drawbar receiver tube. The arch frame of the hitch running back to the axle is 8 by 16-in., 1/4-in steel tubing. The rear axle, including wheels, is from a Jiffy high dump. The 20-in. high axle allows Archer to drive over swaths and an occasional misplaced bale.

Hydraulic power is the key to the hitch unit. The tractor pto powers an 80-gal., two-stage fluid power pump. Oil from that pump powers 55 hp hydraulic motors at each baler hookup point. The motors power the balers' pto shafts and four electric-over-hydraulic valves for each baler.

While he can use the hitch on tractors as small as 110 to 120 hp, he also uses tractors as big as 255 hp.

"One of the key things we did was stage the pump so it could run at reduced engine rpm's and still get appropriate shaft speed out of the motors," says Archer. "An engine speed of 1,640 rpm's at the 1000 rpm pto shaft yields 540 rpm's on the motors. The lower engine speed lets us save fuel and optimize space between the gears. If need be, we can get the pto shaft yield to more than 800 rpm's at the motors."

Archer uses the 8 by 16-in. frame as a fluid reservoir. Oil is pumped under pressure on 1 1/4-in. lines and returns on 2 1/2-in. lines. The combination of the extended frame reservoir and the large capacity ensures that oil is naturally cooled. Two oil filters are located over the hitch axle.

Hydraulic rams on the baler hitches move them from trailing position to baling position. It adjusts to swaths from 9 to 19 ft. apart.

The hitch telescopes out to straddle a swath made by the lead rake or reconditioner and pulls back in to stay off swaths being baled. The fifth wheel nature of the axle allows the operator to "steer" the baler on side hills to prevent drift.

All baler hydraulics, other than the motor electro-hydraulic valves, are controlled from a specially wired control box that mounts in the cab of the tractor. Each baler pickup can be raised or lowered hydraulically and the baler adjusted up and down or from road to field position. Also, an electric outlet at each baler allows the addition of lights or other attachments.

Dwayne Archer designed a hitch that lets him pull two balers at a time (above). Oil from a pto-driven hydraulic pump powers 55 hp hydraulic motors at each baler hookup point.

Archer admits liking to tinker with the hitch. He is confident it is still better than anything he could have simply purchased, even though it wasn't cheap. "We probably have $24,000 in building costs," he says. "Perhaps it could be done for less if you had the iron and hydraulic components, but I probably spent as much on research and development as I did on building it."

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Carbide-Tipped Tillage Points

With today's sophisticated seeding equipment allowing depth adjustments as fine as 1/8-in. for exact placement, a worn drill tip can have a significant negative effect. One way to beat the problem is with carbide tips, says Vic Wickstrom, VW Manufacturing. For the past 10 years, he has been putting carbide points on the products he sells.

"Adding carbide raises the cost, but it will pay for itself many times over," he says. "It is especially effective in abrasive, compacted soils and in direct seeding. In direct seeding, the ground can often be as hard as a highway. Any tool will work in butter, but when you hit the highway, it takes a tough one to stand up."

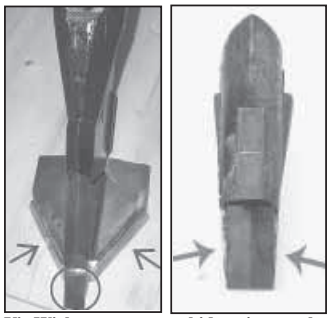
Wickstrom makes a variety of chromium carbide and steel carbide points and does custom carbide work. Customer satisfaction with carbide tips has led to increasing amounts of the extremely hard materials on the plow points.

"I don't even sell drill points or shoes without carbide anymore," says Wickstrom.

The company's popular VW7C has a single carbide tip, but is also available with two additional carbide tabs above the breaking point to offset wear from soil flowing over the tip.

"It doesn't do any good to have the tip left and the housing behind it worn away," says Wickstrom. "Our main new product is the VW10, which is a full carbide opener. It has both a carbide front and carbide wing sides."

Wickstrom says the quality of the tips sell themselves once farmers have experienced their extra wear. He points to a VW7 tip used alongside a competitive carbide tip on the same Flexicoil 5000 air drill. After three years, the competitive tip is worn away, while the VW7C has lots of life left in it.



Vic Wickstrom puts carbide points on the tillage products he sells. "It reduces wear especially in abrasive and compacted soils," he says.

While prices vary from year to year, currently the VW7C is priced at $24.95 with carbide tip or $34.95 with added carbide tabs. The full carbide steel VW10 is priced at $69.95. (All prices are in Canadian dollars).

Wickstrom sells his products direct to farmers from his business in Dunmore, Alberta. Photos with close ups of his entire product line can be viewed at www.vwmfg.com. U.S. customers are asked to contact the U.S. distributor listed below.

Contact: FARM SHOW Followup, VW Manufacturing, Ltd., 406 Eagle Butte Ave., Dunmore, Alberta, Canada T0J 1A0 (ph 403 528-3350; fax 403 529-6448; thewickstroms @shaw.ca; www. vwmfg.com). In the U.S. contact: Loren Hawks, 2434 Whitlash Road, Chester, Montana 59522 (ph 406 432-3810; cell 406 460-3810; jlbp@northerntel.net).

Neighbors Combined Their Hay Rakes

Dale Widdison wanted a larger hay rake to make a bigger windrow in one pass because the hay on his Hooper, Utah, farm is usually not very heavy.

Widdison looked at buying a new rake but he couldn't justify the price. However, he liked his Tonutti three-wheel rake and noticed that his neighbor had a similar model.

"I asked him if we could be partners," Widdison explains. The two agreed to combine their rakes to make a double rake. Widdison removed the center frame from one rake and cut about 1 ft. off each rake's square tubing to make them fit inside the center frame tubing. He drilled holes and used pins to join the rakes together.

Since one set of tines faced the wrong direction, he unbolted one set of rake wheels and turned them around.

"We've been using it for five or six years," Widdison says. "It's a wonderful time saver. It cuts baling time in half and I can rake 15 acres an hour."

If the hay is heavy, he takes one pin out of the rake, and slips off one side of it. He leans it against a fence so it's easy to hook up again.

Widdison puts up a few hundred acres of hay each year, and his neighbor puts up 50 to 100 acres. Their time schedules coordinate well. Widdison likes to start raking at 5 a.m. When he's finished, he leaves the rake on his older Ford tractor, and his neighbor, who lives about 1/4 mile away, picks it up when he's ready.

Dale Widdison combined his Tonutti 3-wheeled rake with a neighbor's similar model to make a double rake.

The partnership works well and other neighbors have made similar rakes. One connected two rakes using U-bolts.

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