

Home-Built 20-Bale Fork Saves Time and Money

Commercial hay producer Brian Schmidt, Sioux Falls, S. Dak., wanted a way to pick up and stack as many as 20 small square bales at a time.

Even though his Hoelscher bale accumulator lays bales out in packs of 10 in the field, he figured he'd save a lot of time if he could handle 20 bales at once when unloading and stacking them.

He'd used both Hoelscher and Hesston 10-bale forks and liked the way they worked, so his first attempt at building a 20-bale fork was to put two forks together. "It just wasn't heavy enough to handle the weight of that many bales," he says.

Schmidt decided to make his own 20-bale fork, designed on the same principal as the 10-bale Hoelscher fork but with a much heavier frame. His frame is 3 by 6-in. steel tubing on three sides, with a lighter 2 by 4 tube on the fourth or front - side. He used 3 by 6-in. tubing for five cross supports, through which pass 1 1/2-in. square tubing shafts that are fitted with four rows of fork teeth.

To further stabilize the fork, Schmidt ran three 12-in. wide, 1/8-in. thick lengths of flat iron from one end to the other. The fork shafts are all linked together so all the teeth open or close at the same time using only one hydraulic cylinder.

He made a quick-tach hitch for the bale mover, so he can use it on either his New Holland TR 140 Bi-Directional or his Allis 8050 front wheel assist.

"When we were building it, we intended to use Hoelscher teeth on it," he says. "Those are about \$20 each and we needed 40 of them."

Rather than spend \$800 for teeth, Schmidt decided to make his own by putting together two pieces of 1/4-in. flat iron and then adding a 7-in. length of round bar cut from old dump rake teeth at the end, so they look sort of like a C. "I cut the dump rake teeth at an angle so the ends would be pointed," he says. "I was able to cut four 7-in. pieces from one rake tooth, so I used 10 dump rake teeth in making this."

Schmidt figures the 20-bale fork cut his



Schmidt made a quick-tach hitch for his bale fork, allowing him to use it on either his New Holland TR 140 Bi-Directional tractor or his Allis 8050 front wheel assist tractor.

unloading and stacking time by more than half. Because he made it himself, he figures it cost only about \$1,900.

"Now that I've made one and used it all summer without any problems, I'd be willing to make a few more for others who are interested. If I were making them, though,

I'd probably want to use the Hoelscher teeth. Making the teeth was the hardest and most time-consuming part of building it," he says.

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Old Disk Frame Makes Great Field Cultivator

When the front gangs on Bruce Erdman's 15-ft. tandem disk wore out, he bought a new disk. But, he notes, "The rear gangs were still good on the old disk so I figured there had to be some way to make use of what was left of it."

He says he needed a light field cultivator and after thinking about it awhile, he put together a plan to build one.

His first step was to take off the front worn-out disk gangs. Then he made a light frame of thick-walled 2-in. square tubing that holds three ranks of seven S-tines with duck-foot sweeps on them.

"I attached this to the disk frame in place of the front gangs. I had to calculate the spacing so the tines weren't in the way of the mountings, but it worked out well. The bars holding the three ranks are 18 in. apart and the way it worked out, there's about 18 in. between the tines on each bar," he says.

"With the S-tines in front of the single disk gang, it goes into the ground easily. In fact, I



There are three ranks of seven S-tines, all of them equipped with duck-foot sweeps.

had to put gauge wheels on it to keep it from going in too deep," Erdman says.

For gauge wheels, he salvaged the hubs off an old hay crimper and made brackets to mount them in front of the S-tines. "I had to set them far enough back to make sure I couldn't get into them with the rear tractor



Bruce Erdman replaced the worn-out front disk gangs on his 15-ft. tandem disk with field cultivator S-tines. The gauge wheels on front were salvaged from an old hay crimper.

tires in a sharp turn," he adds.

He bought new steel tubing and S-tines and brackets for his digger. Even so, he figures it cost him less than \$600 to build it. He says actual shop time in building it was less than 15 hours, and that includes the time it took to put together the gauge wheel mountings. "I spent more time figuring out how to do it than building it," he notes.

"I've used it a couple of years now, mostly in oat and rye stubble. It does a good job of working the soil and the disk in back leaves

a well-worked seedbed," he continues. "If I were doing it again, though, I'd probably put the digger on the back and let the disks cut up soil and crop residue in front. It will handle most residue conditions, but if there's a lot of loose straw on the ground, it sometimes plugs."

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"Made-It-Myself" Backhoe Mounts On Garden Tractor

Why hire somebody to do a job when you can do it yourself, says Ray Reisner, who spent last winter designing and constructing a backhoe to fit his garden tractor.

Reisner estimates it cost a little over \$600 to construct the backhoe, which he designed from scratch. The machine mounts on his Deere 111 lawn tractor and will dig 6-ft. deep trenches. The bucket is 12 in. wide and 9 in. deep.

The power steering system off a truck provides the hydraulics needed to run the backhoe. All the hydraulic cylinders came off a cab-over semi tractor. Reisner, a mechanic, made all the hydraulic lines, bushings, and linkage at his shop. He has also built another bucket for it that is 16 in. wide, which is used for digging footings.

Reisner used the backhoe extensively when he constructed an addition to his home. He tore out an 8-ft. long, 4-ft. wide concrete



The power steering system off a truck provides the hydraulics needed to operate the backhoe.

sidewalk, dug out buried railroad ties, excavated footings and electrical cables, and worked on landscaping projects. The backhoe also provided the "muscle" when he rebuilt the drive of a Dixon lawn mower. He hooked



Machine mounts on Reisner's Deere 111 lawn tractor and will dig a 6-ft. deep trench.

a chain on it and used the backhoe to lift the heavy machine and set it on barrels to give him room when he rebuilt the drive of the mower.

"You can do just about anything you want

with it," he says.

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