Tooth Design For Hay Rakes "Lasts Longer, Works Better"

After he got tired of having to constantly replace teeth on his 12-wheel, bi-fold hay rake, Mel Kuehn came up with his own patent pending design that, he says, lasts much longer and also works better than conventional teeth.

He calls it a "camber twin hay rake tooth". "It uses a trailing action rather than pushing into the direction of travel, which results in less stress on the tooth and longer life," says Kuehn.

Unlike conventional S-shaped teeth, which have two sharp bends, Kuehn's teeth have only a single, gentle bend near the bottom. The tooth is dragged forward instead of being pushed into the ground as with an S-shaped tooth.

"I've used these new-style teeth on more than 900 acres and couldn't be happier with them. They do a beautiful job raking hay," says Kuehn. "A big problem with conventional rake teeth is that they catch on rough, uneven ground and break. My rake teeth don't stick out as far from the band so they have more support. The distance from the band to the tip of the tooth is 10 inches

compared to 15 inches for an S-shaped tooth. One time I pulled my rake through a pasture with 2-ft. high grass and didn't break a single tooth. Also, hay is less likely to slide under the teeth without getting raked. The design really shines in green chop where the grass is heavy. Another advantage for shorter teeth is that they're less likely to tangle with the teeth from another wheel.

"I call it a camber tooth because where the bolt goes into the tooth, the tooth has a little bit of a camber, or arch, which gives it strength and keeps it from bending.

"I generally wait until there are several broken teeth on a wheel before I replace all of them. It wouldn't work to replace individual ones because my teeth are shorter than the original ones. The tooth is designed to be inserted into the band and bolted to the hub the same way as the original teeth. However, only one bolt is needed per tooth instead of two which makes them easier to install. Also, I don't have to change the hub or the outside band. It takes 20 sets of teeth per wheel. Each set of teeth sells for \$1.35. "Another advantage is that the same size



Bale fork works great for unrolling straw into small pens.

Bale Forks With Rotating Tines Unroll Hay

Bale tines on this new bale fork rotate to unroll hay onto the ground or into bale feeders.

The hydraulic-driven tines have weldedon traction bars that grab the bale as it's being unrolled. The operator hydraulically moves the tines closer together as the bale gets smaller in diameter.

"The tines can also be used to clamp onto odd-shaped bales or bales that are hard to reach. Besides feeding hay, it also works

great for unrolling straw into small pens where you would normally have to unroll bales by hand," says the company. The unit adjusts to fit virtually any front-

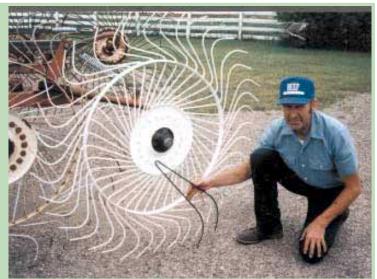
end loader.

Sells for \$4,000 (Canadian). Scarrow says he's looking for dealers.

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Hydraulic-driven tines have welded-on traction bars that grab bale as it's being unrolled. Operator hydraulically moves tines closer together as bale gets smaller.



"It uses a trailing action rather than pushing into the direction of travel," says Mel Kuehn about his new "camber twin hay rake tooth?

tooth will fit any size wheel on any rake, whereas conventional S-shaped teeth with their sharp bends have to be designed to fit a certain size band.'

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Seltzer cut a pair of steel brackets that pin to each end of cylinder. Brack-ets in turn pin onto tractor and 3-pt. hitch.

He Made His Own Hydraulic-Operated Top Link

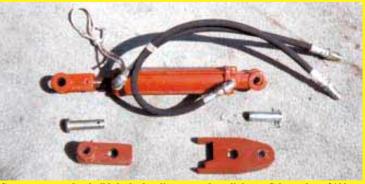
Manually-controlled, screw-type top links on tractor 3-pt. hitches can be difficult to adjust, especially when the 3-pt. is carrying a lot of weight. Commercial hydraulic-operated top links are available but sell for \$180 to \$200. Leonard Seltzer, Manhattan, Ill., made his own using a standard 8-in. cylinder.

Seltzer bought the 2 by 8-in. cylinder at a Fleet Farm store for \$50. He cut a pair of brackets out of heavy plate steel that pin to each end of the cylinder. The brackets in turn pin onto the tractor and 3-pt. hitch.

"I use it with a pallet forklift on my Long

360 tractor, which has about 35 horsepower,' says Seltzer. "One end of the cylinder is threaded which allows me to adjust the yoke up or down. I bought 3/8-in. dia. hydraulic hoses and fittings. My total cost was about \$100. I drew a cardboard pattern and used it as a template to make the end brackets. You could use a bigger cylinder on a larger tractor."

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Components used to build the hydraulic-operated top link cost Seltzer about \$100.

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