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"Regenerator" Reclaims Old Forage Ground

When sod gets so root bound it's difficult to penetrate with conventional equipment, the only answer is ripping it up and replanting. Brandon Janssen has another option. His forage "regenerator" cuts through the sod, shatters the subsoil and then closes the cut.

"I wanted something that would eliminate compaction and let in air, micronutrients, fertilizer and water," explains Janssen. "I looked at spiked roller machines but figured they would just pack the soil even more."

After about 200 hrs. of work, Janssen had what he wanted. A 16-in. coultter precuts the sod layers. It's followed by a 5/8-in. thick shank with a replaceable cutting edge on front and a lifting rod on the bottom. After it has shattered the subsoil, a coil spring mounted packer wheel closes the cut to conserve moisture and leave a smooth surface for hay cutting.

Janssen has used the device for nearly 18 years and, depending on field and weather

conditions, it has delivered from 25 to 100 percent yield increases in forage production. In moist soil conditions, a 4-shank machine can be pulled with only a 70 hp tractor with mechanical front wheel drive. In dry conditions, power needs can increase to require a 140 hp tractor with mechanical front wheel drive.

Janssen recommends running at an 8-in. depth in grass, but dropping to 12 to 16 in. in alfalfa. Cutting edges and lifting rods last

about 400 acres in moist conditions and less in dry soils.

"A 4-shank machine sells for \$12,000 (Canadian)," says Janssen. "However, the cost can quickly be recovered in yield increases and fertilizer savings."

Contact: FARM SHOW Followup, Tubalcain Technologies, P.O. Box 75, Vega, Alta., Canada T0G 2H0 (ph 780 674-5920; www.tubalcaintechnologies.com).



John Haldemann couldn't find a hydraulic working table for calves, so he modified his Thorsen manual table.

Hydraulic Table Makes Calf Work Easy

Unable to find a hydraulic working table for calves, John Haldemann did the next best thing. He modified his Thorsen manual table. At age 80, the easy-to-use table makes routine jobs a lot easier.

"You could find hydraulic tables for full-size cattle, but not for calves," he says. "Adding hydraulics to the table we had was fairly easy."

Initially he had planned to go with an elaborate mechanism of shafts and arms. Instead he opted for a simpler system. All that was needed was a two-way hydraulic valve and a cylinder. Haldemann had both unused from another project.

A base of angle iron already extended out at ground level to support the manual drop

down of the table. Haldemann reinforced it with more iron and then fitted it with a 2 1/4 by 18-in. cylinder.

"The tricky part was to find the right points at the top edge of the table and the base to attach the cylinder," says Haldemann. "After moving it around some, it turned out real slick."

Haldemann uses a small tractor to power the cylinder via long hoses he installed.

"With a crew of two or three people, we can brand and treat all the calves from our cow herd," he says. "It works great."

Contact: FARM SHOW Followup, John Haldemann, 2525 Haldemann Rd., Chinook, Mont. 59523 (ph 406 357-2078).



When the treadle is pumped up and down, connecting rods turn the reel and shake the screen.

Foot-Powered Mini Thresher

A foot-powered thresher is the perfect match for family-sized grain plots or on-farm research plots. Until now, hand threshing was the only alternative for people growing grain in plots too small for a combine.

"Producing small grains such as wheat and oats in 1/2 to 1-acre patches often requires harvesting and threshing by hand," says Jim Smith, at The Back to the Land Store. "These units are much faster and are being made by a Tennessee farmer who is fabricating them in his shop."

The small-scale thresher consists of a foot treadle, an enclosed threshing reel and a winnowing screen. When the treadle is pumped up and down, connecting rods turn the reel and shake the screen. Grain heads fed into the thresher enclosure are struck by U-shaped

beaters mounted on the spinning reel. The grain and trash fall to the vibrating screen. The seed falls through to a sloped discharge chute while other materials slide off.

"Some chaff will fall through the screen too, so the grain will require a final winnowing," says Smith. "The screen will thresh out about a pound of grain per minute on average."

Smith adds that chaff and debris does have to be removed from the screen periodically.

The thresher is priced at \$650.

Contact: FARM SHOW Followup, The Back to the Land Store, 545 Salmon Branch Rd., Erin, Tenn. 37061 (ph 931 764-0034; toll free 866 764-0034; contact@backtotheland.com; www.backtotheland.com).



He added a 2-way valve and a hydraulic cylinder, which are powered by a small tractor.



Small-scale thresher consists of a foot treadle, an enclosed threshing reel, and a winnowing screen.