



## Reverse Feed For Round Balers

A reverse-feed device for big round balers helps reduce the chance of injury and saves time, according to South Dakota vo-ag instructor J.P. Thelen of Pierre.

Thelen developed the add-on reverser while working on an advanced degree at South Dakota State University. The device can be retrofitted to most pto-driven round balers to reverse the hay pickup and compression rollers, kicking out plug-ups so the operator never has to leave the tractor seat.

The reverser consists of a shuttle-type transmission installed in the main driveline between the tractor pto and the baler gearbox. The add-on transmission was modified from another piece of equipment. The reverser is activated by a rope pull. Sprag clutches installed on the baler ensure

that the bale in the chamber doesn't turn — only the compression rollers and hay pickup.

The prototype reverser was installed on a Vermeer 605 baler but should fit any pto-driven machine. Thelen told FARM SHOW the conversion can be made with about \$600 worth of parts and about 20 hrs. work. "Time saved baling due to increased efficiency will easily pay for the unit," he told FARM SHOW.

For a free copy of a report that contains detailed drawings and photos, contact: FARM SHOW Followup, D.P. Froehlich, Department of Agricultural Engineering, South Dakota State University, Brookings, S. Dak. 57007 (ph 605 688-5141).

## Low-Gravity Mower For Roadbanks

Illinois farmer B. L. Uhnken, of Jacksonville, built this low-gravity, highly maneuverable mower for steep roadbanks, and to "hug" fences and buildings.

Key components include a salvaged engine from a Deere 45 combine, a Jeep pickup truck chassis and a Woods L 306 mower head.

The mower moves by way of hydraulic power while the mower head is driven mechanically. Uhnken mounted the engine backwards. A drive shaft from the engine, positioned along the right side, delivers power to the mower head, turning it at 2,000 rpm. A hand-engaged belt tightener serves as a clutch for the mower head.

The Woods mower head is 6 ft. wide and has three cutting

blades. It cuts up to 6 in. high and angles up or down up to 45°, enabling it to negotiate steep roadbanks. It is raised by the hydraulic cylinders salvaged from a combine reel and powered by an old automobile power steering pump.

The four-wheel-drive chassis twists in the center to follow ground contours.

Uhnken notes that, "the mower's front end pendulum or flexing action is needed for roadbanks and ditches, but a means is needed to stop this swinging action long enough to mount a roadbank. For this reason, I made provision for the insertion of pins to hold the head rigid temporarily. Once I'm on the bank, I pulled the pins so the mower head can flex."



Photo courtesy Grass & Grain

## Tow-Behind Gooseneck Hitch

Marvin Sharp, St. George, Kan., designed a special gooseneck trailer hookup so he could pull his gooseneck horse trailer behind his pickup without removing the camper.

Sharp came up with a two-wheel trailer to pull behind his trailer that attaches directly to the gooseneck. Constructed

from reinforced heavy steel, and an axle from an old trailer, the tow-behind unit has a gooseneck ball welded to a plate. The 2-wheeled unit fastens directly at two points to the pickup bumper and can be detached with easily removable pins. It can also be hooked up to a car bumper, Sharp notes.

## Roller Chain Idler

"As roller chain stretches and wears, along with sprockets wear, I can make them last a year or two longer by adding idlers made from flat belt pulleys," says David Prause, China Spring, Tex.

Prause says the pulleys are mounted in such a way as to keep the chain tight on the

sprocket. He notes that they can be deepened by welding large flat washers to the sides to keep chain from jumping track. He uses pulleys with sealed bearings, or which can be drilled to add grease zerks.

He's used the idler idea on his New Holland haybine, square baler and bale wagon.



The mower, with a 4-ft. wheelbase, will mow to within an inch of a fence or building. Uhnken notes that a straight Jeep chassis is narrower than a Jeep truck chassis and would

make for more maneuverability around fences and buildings.

The mower, which travels about 2 mph while mowing, has six speeds forward and two in reverse.