

Bigger Sprocket Speeds Grain Discharge

Tired of his Case IH combine taking too long to unload, Steve Kaltenheuser did something about it. With the addition of a modified auger drive sprocket, he increased unloading rate of 19 percent moisture corn from 2.2 to 3.3 bu./sec. Now he is selling the faster sprocket to other Case IH combine owners. He admits a bigger sprocket wasn't his first thought.

"We were going to make a bigger unloading auger, but we decided to try a bigger sprocket first," says Kaltenheuser. "The auger system is all force fed, so if we speeded up this one, we figured it would speed up the entire system, and it did."

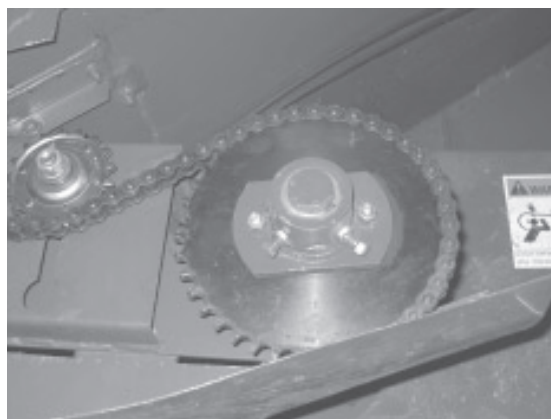
The sprocket has two sheer bolts as added

protection for the unloading system. In three years of using his, Kaltenheuser says he has yet to snap a single bolt.

He sells the modified sprocket with its 50 percent increase in auger speed for \$105. So far he only offers it for 1600-2300 Series Case IH combines.

"I have heard that Case increased the unloading speed on their newest line of combines, but I don't think they are still as fast as mine," says Kaltenheuser.

Contact: FARM SHOW Followup, Steve Kaltenheuser, Kaltenheuser Farms, Ltd., 50690 270th St., Ames, Iowa 50014 (ph 515 769-2461; fax 515 769-2463; bjkalt@huxcomm.net).



Bigger auger drive sprocket is designed to increase unloading rate of corn on Case IH 1600 to 2300 combines.

Wind Turbine Cylinder Designed To Handle High Winds

Arthur Kaliski has developed a self-governing cylindrical windmill that keeps producing energy when other windmills have to shut down due to high winds and that can even be used in congested, urban areas where it's not practical to put a twin blade turbine on a tower. It also operates more efficiently at lower speeds.

Past designs of cylinder-type windmills could be damaged by high winds. Kaliski says he's solved the problem. "My prototype is designed to close gradually as wind speeds increase, reducing available surface area to catch the wind."

Kaliski's design would continue to operate at peak efficiency until wind speeds become extreme and the two halves come to-

gether completely to form a closed cylinder that doesn't catch the wind.

Kaliski is working with a State University of New York Engineering Department to test his design. Once that work is done, he'll be looking for licensing partners.

"The prototype is only 7 ft. tall and will produce about 1/2 kW with a 27 mph wind," says Kaliski. "It could be made larger or smaller. Because of its gyroscopic action, it can be set in place without anchors. It could be portable for use with RVs to charge batteries or for use in emergency situations."

Contact: FARM SHOW Followup, Arthur Kaliski, P.O. Box 1513, Amagansett, N.Y. 11930 (ph 631 267-2092; akaliski@milwind.com; www.milwind.com).



Self-governing cylindrical windmill keeps producing energy when other windmills have to shut down due to high winds. Photos show windmill open (left) and closed.

Power Mixer Pumps Solids From Septic Tanks

Until he created a septic tank power mixer, Val Stockert was never satisfied with the results of pumping septic tanks that had lots of solids. The liquids pumped out, leaving most of the solids behind.

"I tried a dozen or more different devices," Stockert says. "Then I thought of an airplane propeller. It really rolls the solids in there so I can pump them out."

The design is simple, with paddles that fold down to make it through a 4-in. tank cleanout hole. The paddles are attached to a 3/4-in. steel pipe. A welded piece at the top of the pipe fits a drill. Starting the drill opens up the paddles to a 15-in. diameter. The paddles collapse when the drill is turned off.

Though a 1/2-in. or 7/8-in. drill will work, Stockert recommends a 3/4-in. drill to do the best job.

"It works like an eggbeater," Stockert says. "The pitch of the blades grinds up material as it's rotated and pushed around the tank."

After stirring for less than five minutes, the solids pump out quickly with the liquids. Pumping time is cut from half an hour to about 10 minutes on a 1,000-gal. tank, Stockert says.

Retired, Stockert still has three sons in the sanitation businesses, who all use the mixer. He recently started selling the mixer.

Ideally, pumpers leave about 2 in. of sewage in the tank to keep bacteria starter, Stockert says. In the past, some pumpers added water to pump the solids out, but that practice is shunned by the industry as it also hurts the bacteria that breaks down the solids. Stockert's system preserves the bacteria.

He charges \$140 (plus shipping) for his collapsible model, which includes a 7-ft. pipe,



Power mixer is designed to be operated by a drill. Starting the drill opens up paddles to a 15-in. diameter. The paddles grind up material as they rotate and collapse when drill is turned off.

plus a 3-ft. pipe extension. He also has a \$90 non-collapsible model that slips into 10-in. or larger septic risers.

Contact: FARM SHOW Followup, Val Stockert, 2098 Valentine Ave., Dickinson, North Dakota 58601 (ph 701-225-0782).

Plow Truck Used To Make Portable Hoist

"When I got tired of trying to move heavy machinery and other loads around my yard and shop, etc., I took a look at my snowplow truck to see if I could use it to solve my problem," says Brad Hurst Sr. of Cresco, Iowa. "I designed a hoist to fit it that will move up to 1,000 pounds and put it most anywhere. Best of all, it's detachable so I can still use the truck to plow snow in winter."

Hurst used the snowplow's existing mount and pins; however, he put the plow's ram down and then inserted the top pin in the cylinder's extra hole so the hoist arm would be stable.

He used 6-in. I-beam to make the hoist, plus a 6-in. channel cross bar at the bottom, with I-brackets for the bottom pins.

The I-beam has a 9-ft. section that sits at a 15 degree angle away from the truck's grill, and then it bends out at a 90° angle for about five feet.

"I had to brace the area where the I-beam bends out to give it extra support," he says. "The I-beam already had a hole for a clevis at the top outer end, so I hung a chain hoist on the clevis. Now, I can move most anything - I can even drive up to a vehicle and pull an engine."

Hurst says a chain hoist is ideal for setting an engine in a vehicle because "you can stay under the vehicle to line things up, since the chain to lift and lower the engine is right beside you."

"The reason I made this is because one person can pretty much do everything - you don't have to have any help," he says. When it's not in use, I suspend it from a stationary hoist. One person can mount the unit to the truck in minutes.



Brad Hurst Sr. designed this hoist to fit his snowplow truck. It will lift up to 1,000 lbs. and comes in handy for doing mechanical work on small pickups and lawn mowers.

"It took me about six hours to build this hoist and I've only got between \$50 and \$75 invested in it. I already had the chain hoist and plow truck," he says.

Hurst says he uses the unit "all the time." He does a lot of mechanical work on small pickups and lawn mowers.

"It makes it really handy. I can drive up town or to anyone else's home and do something if I need to," he adds.

Contact: FARM SHOW Followup, Brad Hurst Sr., 14867 Robin Ave., Cresco, Iowa 52136 (ph 563 380-2941).