

Beefed-Up Cylinder Boosts Combine Efficiency

Without much effort, you can upgrade your conventional combine cylinder to do a better job threshing and with less energy and reduced grain damage, says Gerald Foster, owner of Sunnybrook Welding, Sunnybrook, Alberta.

Taking a cue from the Class/Cat Lexion conventional, Foster designed what he calls a "high inertia" combine cylinder in an attempt to make other combines as productive as the Lexion. Foster's cylinder has more weight at the outside - which gives it more inertia and keeps it turning when other cylinders with a higher proportion of their weight toward the center would slow down.

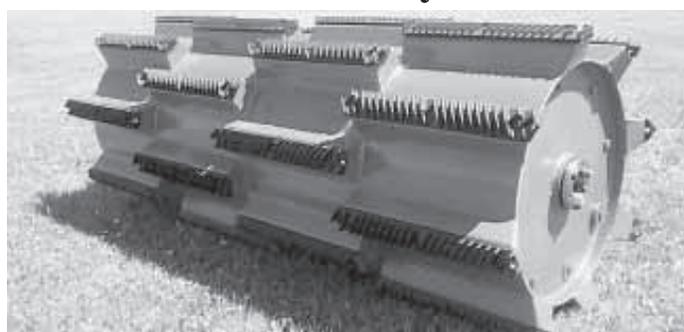
The Sunnybrook 32-bar cylinder depends on the cylinder tube itself for structural support rather than a central shaft.

Rather than the usual 8 or 10 bars, the Sunnybrook cylinder has 32 staggered reversible rasp bars. Because the cylinder is

truly enclosed, it can also be reversed.

Foster had the Prairie Agricultural Machinery Institute (PAMI) at Humboldt, Saskatchewan, test the Sunnybrook cylinder against a standard cylinder in a Deere 9610 combine. The PAMI study showed the Sunnybrook required 17 percent less power to operate with the same grain load. Load sensors on the concave showed a more uniform flow of material through the cylinder with the Sunnybrook design.

Foster says the staggered bar design is responsible for the more uniform flow. With the staggered bars pulling the material through, there's less bunching and less force generated by the mat of crop material. That makes for better, faster threshing with less grain damage. And at the same time, the construction of the cylinder itself means it doesn't bend or flex as much as an OEM cylinder in a heavy crop, claims Foster.



"High inertia" combine cylinder has 32 staggered rasp bars that mount on solid steel tube.

The Sunnybrook Generation II 32-bar staggered cylinder, complete with boronized bars, sells for \$4,000 Canadian.

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Sunnybrook Welding, Box 28, Sunnybrook, Alta. T0C 2M0 Canada (ph 780 789-3855; E-mail: sunny@istar.ca).

Bolt-Together Hopper Bottom Kit For Grain Bins

One-piece, welded-together hopper bottoms that convert flat-bottom bins to hopper bottoms have been on the market for years. This new bolt-together kit is designed so that you can put the hopper together yourself and save money, says Friesen Mfg., Storm Lake, Iowa.

Hopper bottoms are easier to clean out and also increase storage capacity, adding anywhere from 350 to 1,300 bu. The do-it-yourself hopper has a 40-degree slope and mounts on heavy tube steel legs. It has a rack and pinion slide gate at bottom with an 18-in. opening. A long-handled crank opens it.

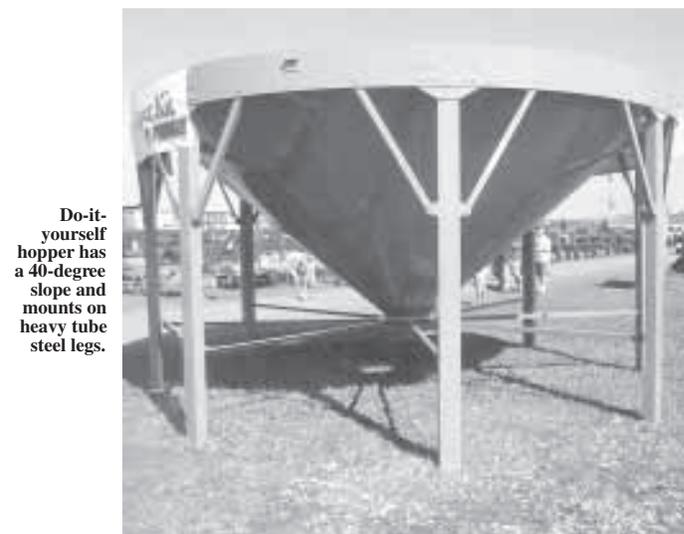
You need a loader tractor or skid loader to put the hopper together. It takes a minimum

of two persons to bolt together the pie-shaped sections that make up the hopper.

"The kit fits most bins. However, there are four different things we have customers check before they buy to make sure the kit will fit their bin," says Rhonda Burnside.

The kit ships in a 7 by 13-ft. package. Models are available for bins ranging from 2,850 to 10,700 bu. An 18-ft. dia. model designed for a 3,500-bu. bin sells for less than \$3,250 plus S&H.

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Do-it-yourself hopper has a 40-degree slope and mounts on heavy tube steel legs.



Add-on rollers for decks allow you to get close to trees without doing damage.

Add-On Rollers For Mower Decks

If the tree trunks around your farmstead have knicks and scrapes from mower decks that get too close, you'll like this idea. "Wheel-A-Round" add-on rollers for decks allow you to get close without doing damage.

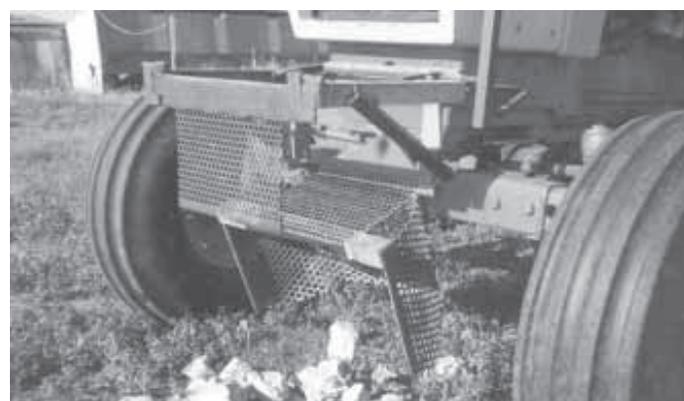
James Schutz showed his invention off for the first time at the Minnesota Inventor's Congress last summer.

The device is fitted with 7 roller-blade type heavy-duty plastic rollers that gently walk the deck around trees, buildings, and other obstacles to prevent damage. The unit

attaches with two bolts and can be fitted to virtually any deck. Installs on the side of the deck opposite the discharge chute.

"I got the idea because I have a small orchard and was wrecking too many trees with my mower. Every time I nicked a tree I had to get off the mower and tape over the nick so that the tree could heal," says Schutz.

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Edwin Egli uses hammermill screens to make rock boxes for the front of his tractor. "The screens keep dirt and water from collecting in the box," he notes.

Rock Boxes Made From Hammermill Screens

Edwin Egli, New Salem, North Dakota, makes rock boxes for the front of his tractors using old hammermill screens.

"Most rock boxes I've seen have solid bottoms that collect dirt and water," he says. "With a screen in the bottom, everything drops through but the rocks."

To make a rock box, he mounts pieces of the heavy duty screen in an angle iron frame that bolts to the tractor. "I hinge the bottom

screen at the back so dumping is easy," he says. "The screens have 1/4-in. holes and are made of hardened steel, so they'll hold a lot of weight," he says. "If I need weight on the front of the tractor, I can just load them up with rocks."

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