Mid-mounted boom picks up big round bales on either side of bus.

PIVOTING BOOM LOADS, UNLOADS BALES

Bale Bus Loads Itself

"It lets one man pick up bales in the field and stack them back at the farm without ever getting out of the cab," says Don Sheahan, Reedsville, Wis., who turned an old 66-passenger school bus into a round bale loader equipped with a pivoting loader boom. It'll handle up to 12 bales at a time and stack them two high or drop them into round bale feeders.

The 1978 International 66-passenger school bus is equipped with a diesel engine and 5-speed transmission. Sheahan cut off the body behind the driver's seat and made an enclosed cab by cutting off a 2-ft. section at the back of the bus and welding it to the back of the cab. He then bolted 4 by 4's across the bus frame to hold big bales.

The loader boom hinges in the middle and mounts on top of a heavy steel pedestal that bolts to the center of the bus frame. A big 6 by 18-in. cylinder raises and lowers the base of the loader arm, and a 3 1/2 by 24-in. cylinder controls the upper section. A 2 by 12-in. cylinder powers the bale clamp and a 2 by 8-in. cylinder swivels the clamps from side to side, allowing Sheahan to pick up the bale on either its flat side or round side. A hydraulic motor rotates the boom arm back and forth on the pedestal. Sheahan uses a 5-unit hydraulic valve, operated by electric solenoids, to control all functions from the cab.

"I load two rows of bales ahead of the boom and two rows behind it. I can add a single row of four bales on top. I removed the springs on the bus frame in order to keep the loader stable as it pivots and to eliminate the need for outriggers. Bales never get more than 9 ft. from the center of the floor so their weight isn't enough to lift the opposite side of the bus.

"I'm willing to custom build bus bale loaders for others and also to mount the loader arm on stripped-down trucks with long wheelbases."

For more information, contact: FARM SHOW Followup, Don Sheahan, 15807 San Rd., Reedsville, Wis. 54230 (ph 414 754-4434).

Home-built "Econo-Vac" uses a fan to move grain instead of a positive displacement pump and eliminates the need for an air lock, greatly reducing the cost of machine.

COSTS THOUSANDS OF DOLLARS LESS THAN CONVENTIONAL UNITS

"Poor Man's" Grain Vac

"I built it because I didn't want to spend the money for a conventional grain vac and I wanted a simpler design with less maintenance," says Andy Orosz, Dubuc, Sask.

The "Econo-Vac", as Orosz calls it, uses a fan instead of a positive displacement pump and a transfer auger instead of an air lock. Grain is sucked up through a plastic hose fitted with a wheeled nozzle into a 3-ft. long steel pipe mounted on one side of the separator. The fan creates enough vacuum in the pipe to transfer as much as 2,000 bu. per hour. A transfer auger behind the fan delivers grain into the hopper of any conventional auger. Air from the fan exits through an exhaust pipe on top of the unit. The pto-operated unit requires only a 65 hp tractor.

"I spent only $3,500 to build it, not counting my labor. The cheapest grain vac on the market with comparable capacity sells for $9,000," says Orosz. "The problem with conventional grain vacs is that they use high tolerance components such as positive displacement pumps which can quickly wear out due to grain dust, dirt and gravel. My Econo-Vac works great for cleaning up grain piles on the ground because stones and dirt go right through it with little problem.

"One disadvantage is that it doesn't deliver grain into the truck like a conventional grain vac so I still need an auger. However, with the money I saved I can buy an auger and also use it for other jobs after I'm done cleaning out bins," says Orosz.

For more information, contact: FARM SHOW Followup, Andy Orosz, Box 32, Dubuc, Sask., Canada S0A 0R0 (ph 306 877-4535).

Hitch on back of add-on wheel tows a flatbed wagon loaded with seed and tools. "Lets me plant corn without having to use another support vehicle," says Wessels.

MOUNTED ON STEEL BEAM THAT CLAMPS ONTO PLANTER TOOLBAR

Rear-Mount Wheel Keeps Planter Level

A 24-in. wheel off a New Idea corn picker, attached to the back of his Deere 7100 12-row planter, helps Roger Wessels, Fairbury, Ill., keep the planter level.

The wheel mounts on an 8-in. steel H-beam that bolts to the back of the planter toolbar. Two pieces of 2 by 4 steel tubing run back from the H-beam to either side of the add-on wheel. The wheel lifts with the planter and can be flipped up out of the way for storage.

"I had trouble keeping my planter level. My tractor only has one set of remotes so I couldn't control the planter's lift assist wheels," says Wessels.

To make room for the H-beam, Wessels moved the planter population sprockets over to the left one row.

Wessels pulls a wagon loaded with seed and tools behind the planter, hitching it up to the framework supporting the add-on wheel. Wheels are spaced to run between rows. "It lets me plant corn without having to use another support vehicle. The 12-ft. long hitch lets me turn short at the end of the field," notes Wessels.

Contact: FARM SHOW Followup, Roger Wessels, Fairbury, Ill. 61739 (ph 815 692-2008).

New-Style Cutterhead For Forage Harvester

An experimental forage harvester, equipped with a new-style cutterhead, eliminates the need for a cross auger and blower, say ag engineers at the University of Wisconsin who developed the prototype.

Mounted on a redesigned New Holland 717 forage harvester, the cutterhead has a more efficient cutting and throwing action that allows the operator to go 20 to 30% faster in the field or to use a tractor with 20 to 30% less horsepower.

"The cutterhead does both the cutting and blowing," explains agricultural engineer Kevin Shinners. "Cutterheads on conventional forage harvesters cut downward and throw cut material into a cross auger that delivers the material to the blower. We turned the cutterhead upside down so the knives throw cut material straight up without touching a blower housing or any other surface in the machine. It really shines in alfalfa because you don't have to worry about a crop gumming up inside the blower housing. Another advantage is that the machine has fewer parts so it should be more reliable and less expensive to purchase and maintain."

The cutterhead has 12 knives, with a steel "shelf" bolted below and at right angles to each knife. Cut material lands on the shelf, is compressed, and is then thrown upward by the rotating knife assembly. Large openings in both sides of the cutterhead housing allow more air inside to improve its air pumping capability. The opening takes up about 50% of the side of the housing.

"The machine we redesigned is a small Class I forage harvester," says Shinners. "We plan to build a prototype of a larger Class III machine which will be as big as any pull-type forage harvester on the market.

For more information, contact: FARM SHOW Followup, Kevin Shinners, University of Wisconsin-Madison, Agricultural Engineering Department, 460 Henry Mall, Madison, Wis. 53706 (ph 608 263-1940).