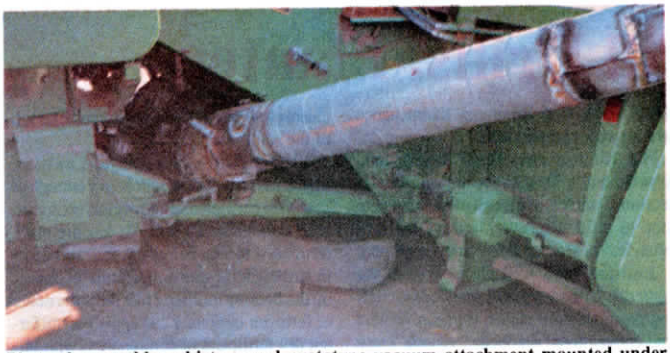


Photo shows rubber skirt around prototype vacuum attachment mounted under Deere header. Big 16-in. dia. blower pipe carries sucked-up grain and straw back up to header where it's dumped onto platform auger.

MOUNTS BEHIND COMBINE HEADER

Add-On Vacuum Pickup Sucks Up Seed On Ground

You've never seen anything like this new add-on vacuum pickup for combines that mounts behind the header, sucking up shattered kernals on the ground and delivering them back up to the platform to be fed into the combine.

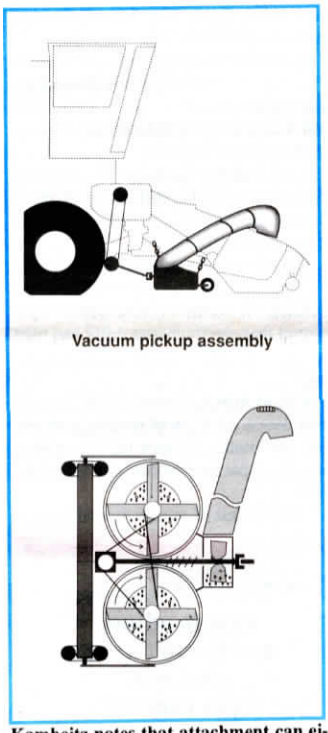
Ben Kambeitz, Richmound, Sask., got the idea during several tough, dry years when grain crops in his area were extremely short and difficult to get into the combine. All of his grain is swathed and then harvested with a pickup header. "In 1989 and 90 we had short, light crops. The pickup just pushed them around, leaving shattered grain and wheat heads all over the ground. We had to come up with a way to salvage that grain. My vacuum attachment picks up 65 percent of wheat on the ground and does an even better job on lighter weight seed like grasses."

The attachment consists of two large 7-bladed fans, taken from Cummins diesel truck engines, and mounted side by side in a housing between the combine wheels. The fans are positioned 6 or 7 in. above the ground. A rubber "skirt" hangs from the bottom of the fan housing down to the ground.

A large-holed screen mounts below the blades, keeping rocks and other large debris out. The fans rotate in opposite directions, driven hydraulically (or by belt off the feederhouse) by a single V-belt with a "twist" in it. Material picked up is delivered to a 22-in. blower, which is housed in a screen that allows dust to escape. The blower then propells crop material up a large 16-in. dia. pipe that dumps the sucked-up grain and straw onto one end of the platform auger, which then carries material to the feederhouse.

"One concern I had in building the unit was that the fan blades would crack grain but straw and other debris seems to provide a cushion so that only about 5 percent of grain picked up gets cracked," says Kambeitz. "It works like a lawnmower, sucking up clippings. The counter rotating fans blow material into the second blower, creating enough negative pressure at the inlet to keep grain from settling out. Centrifugal force in the second blower forces dust out the screen built into the housing. There's also a screen in the elbow of the tube that carries grain up to the platform."

Kambeitz, who is still refining his prototype, says he's tried powering the add-on vacuum both with hydraulics and by V-belt.



Kambeitz notes that attachment can either be belt-powered off feederhouse (as shown in top drawing) or direct-driven hydraulically.

Hydraulics works better, he says, because it allows you to vary speed of the fans, adjusting to changing conditions.

Width of the attachment is about 40 in., matching the width of his combine swaths. Kambeitz notes that width could be increased on a straight-cut header by adding additional blowers or using larger fans. "I think this attachment would work great for picking up shattered soybeans. The problem would be building it wide enough to cover the full width of the header," he notes.

The vacuum unit raises and lowers with the header so Kambeitz says there's no problem raising it as needed to clear obstacles.

He's applied for a patent and is negotiating with a manufacturer.

For more information, contact: FARM SHOW Followup, Ben Kambeitz, Box 93, Richmound, Sask. S0N 2E0 Canada (ph 306 669-2154).

Fluhrer mounted White seed hoppers, pickup units and air delivery system on his Deere 7000 planter. "Gives me the best of both worlds," he says.

HE BUILT A "LIKE-NEW" 12-ROW VACUUM PLANTER FOR $5,000

Deere Planter Fitted With White Air System

Iowa farmer Bill Fluhrer wanted a more accurate way to plant soybeans with his 19788-row Deere 7000 Max-Emerge planter but he didn't want to spend the money for a new vacuum planter.

So he removed the seed hoppers and seed pickup units from the planter and replaced them with seed hoppers designed for a White air planter along with a White air delivery system including fan, hydraulic motor, tubes, and hoses. He bought the equipment new from a White dealer.

"I like the design of the Deere planter for corn but when I switched to soybeans I'd get uneven seed distribution and population rates. White's air planter is much more accurate in beans. It uses air pressure to hold seed in place against a plate at the bottom of the hopper. There's one plate for corn and another plate for soybeans. A fan driven by a hydraulic motor delivers air through a 4-in. dia. plastic tube that runs the length of the planter, and a flexible rubber hose leads from the tube to each plate. Air holds the seed in place until it reaches the bottom of the plate and drops to the ground. Seed size doesn't matter.

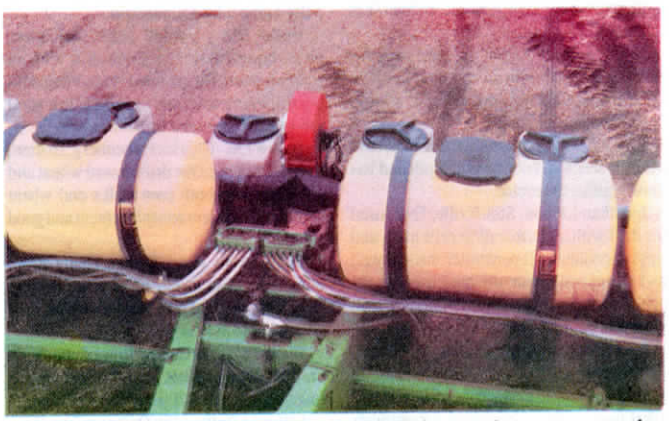
"The planter still uses the base of the Deere row units including openers, seed tube, gauge wheels and packer wheels.

"I increased the size of the planter from 8-row to 12-row by cutting a used Deere 4-row planter in half and adding two row units onto each side of the planter. Both sets of row units are hinged so they can be folded forward for transport. I paid $2,000 for the 4-row planter and spent a total of less than $5,000 to build my air planter. I would have had to pay at least three times as much for a new 12-row Deere vacuum planter."

Fluhrer bolted each White seed hopper to a pair of brackets that he attached to each of the Deere row units. He bolted the fan to a bracket at the center of the planter. The hydraulic motor that drives the fan is operated by the tractor's hydraulic system. The Deere row units were driven from the left side of the planter while the White row units were driven from the right side. To solve the problem Fluhrer moved the drive sprockets over to the opposite side of each Deere row unit.

"I didn't like the screw-on lids on the White seed hoppers so I tried cutting some of the White and Deere seed hoppers in half, then bolting the top halves of the Deere hoppers to the bottom halves of the White hoppers. However, it didn't work well because I couldn't get the two halves to fit tight so only a few of the hoppers are modified," notes Fluhrer.

Contact: FARM SHOW Followup, Bill Fluhrer, Rt. 1, Charles City, Iowa 50616 (ph 515 228-4662).



White blower mounts at center of Deere planter. Drive sprockets were reversed on each Deere row unit to accommodate air system.