



Leaves are funneled into bale chamber with the help of two side panels and a poly cover that mounts over baler pickup.



Abrasion-resistant nylon brushes mount behind tines on existing baler pickup. The brushes, which are staggered, sweep up leaves from smooth, paved surfaces.

Kit Turns Big Square Baler Into “Leaf Machine”

If you're looking for a new source of part-time income, take a look at this attachment for big square balers that's designed to pick up leaves on city streets.

“There's a big market for leaf removal and with this equipment you don't have to make a huge investment to get started,” says Tim Perry, Tap Industrial Products, Waupun, Wis.

The company's “Street Saver” uses abrasion-resistant nylon brushes that cleanly sweep material into the head. The brushes mount behind the tines on the existing baler pickup. The brushes, which are staggered, sweep up leaves and yard debris from smooth, paved surfaces.

The kit includes two side panels made from 3/4-in. thick UV-resistant poly that funnel leaves into the baler; a 12-in. wide, 3-ply “gravel belt” that mounts along the bottom of the baler and protects against accidental contact with a street curb or other object; the brushes; an under-frame pavement scraper on back that pushes material forward so that the brushes can continually sweep the material up into the head; and a 1/2-in. thick, UV-resistant poly cover that mounts over the baler pickup and helps funnel the leaves into the bale chamber.

The kit fits three major brands - the Case-IH 8575, AGCO Hesston 4755, and New Idea

7233. It bolts on using existing holes, with no modifications required to the baler.

“It reduces leaf collection time from days to hours and can save towns a great deal of time and money,” says Perry, who put the kit on the market this fall. “Most towns and cities currently use some combination of grinder-blowers, payloaders, and snowplow trucks. The grinder-blowers require a lot of maintenance and in many cases are old and quite worn. By hiring someone with a baler equipped with our kit, all the city has to do is get the leaves onto the street. Another advantage of our system is that it greatly reduces dust compared to grinder-blowers.

It can even handle heavy, wet leaves.”

According to Perry, a standard baler won't work with leaves because the tines miss 25 to 30 percent of them. “We chose these three baler models because they're equipped with pre-charge chambers that pound material into the bale chamber, putting a maximum amount of material in each bale,” he notes.

Sells for \$6,000.

Contact: FARM SHOW Followup, Tap Industrial Products, Inc., Box 129, Waupun, Wis. 53963 (ph 920 324-3601; fax 920 324-3602).

“Under Head” Stubble Cutter Cuts And Windrows Straw As You Harvest

California rice farmers are being restricted in the amount of rice straw they can burn, and new uses are being found for the straw. A team of researchers at the University of California-Davis set out a couple of years ago to find a more economical way to remove straw from the field.

They came up with an “under head” cutter bar that will work in any grain crop.

Since rice is harvested while fields are wet, the combine tends to mash the straw down into the wet soil, leaving it dirty and difficult to retrieve later, says Matt Yore, a UC-Davis engineering student and a member of the research team.

They decided what they needed was a way to cut the straw stubble and clear it from the path of the combine before the combine runs over it. They designed an attachment that cuts and windrows straw as it's harvested. It consists of a sicklebar cutter with a draper windrower and fits under the header, just in front of the combine tracks.

Hydraulic cylinders allow the cutting height of the cutterbar to be easily adjusted so it doesn't run in the dirt.

The researchers used a conventional combine header sicklebar with a wobble box drive. They designed a swing arm and connecting rod to connect the wobble box to the sicklebar, so the wobble box could be mounted just behind the cutter and not interfere with the header. A hydraulic motor and V-belt drives the wobble box.

They also designed an easy-on attachment system so the operator can easily remove the stubble cutter when it is not needed.

They designed low profile draper belts that can be positioned as close to the sickle bar as possible. Hydraulic motors also drive the draper belts.

Because space under the header is limited, they weren't able to incorporate a reel or similar mechanism to push cut straw back onto the draper. The draper is designed with cleats that pull the straw once it falls on the belt.

They added a variable displacement axial piston pump to power the sickle bar and draper drive motors, an auxiliary pump and directional control valve to control the lifting cylinders, pressure relief valves, filters, and a hydraulic fluid reservoir for both pumps. Controls were mounted in the cab to allow the operator to raise and lower the cutterbar and control the speed of the sicklebar and draper belts.

While initial testing shows promise for the stubble cutting concept, Yore says there are a few problems that need to be worked out. Straw tends to build upon the draper so a more positive feeding method is needed.

Yore says they tried replacing the sicklebar and drapers with a rotary disk cutterbar and initial results show better cutting performance, especially at high forward speeds.

He says the research team will continue to evaluate both types of cutterbars and look for ways to improve the straw cutter to achieve higher straw yields without decreasing the field capacity of the combine.

Contact: FARM SHOW Followup, Matt Yore or Bryan Jenkins, UC Davis -



“Under head” stubble cutter provides a way to cut the straw stubble and clear it from path of combine. It consists of a sicklebar cutter with a draper windrower and fits under the header, just in front of the combine tracks.



Hydraulic cylinders allow the cutting height of cutterbar to be easily adjusted so it doesn't run in the dirt.

Biological and Agricultural Engineering Dept., One Shields Ave, Davis, Calif. 95616 (ph 530 752-1422); E-mail: mattyore@ucdavis.edu or bmjenkins@ucdavis.edu.)