

New Corn Picker Ready For Market

A new 1-row corn picker from Houston Run Manufacturing picks ears cleaner, even in high moisture and trashy conditions. The picker can be horse-drawn with an onboard engine or pto-powered behind a 45 hp. or larger tractor.

"We've had our prototypes out on farms for the past 6 or 7 years," says Jonas Stoltzfus, Houston Run Manufacturing. "They have operated with many varieties of corn and in almost all conditions."

The Stoltzfus family has a history of improving older, pull-type corn pickers. They developed nylon husk brushes (Vol. 43, No. 4) to replace rubber finger wheels found on New Idea pickers and for use on Deere 300 corn pickers. They also developed a business repairing and rebuilding Deere corn pickers (Vol 44, No. 3) such as the 300, the last corn picker Deere made.

They incorporated some of the best innovations from those older pickers into their new design by simplifying and eliminating unnecessary parts. They also included their improvements, like the nylon husk brushes.

Like a Deere 300, the new Houston Run picker features a low profile combine row unit. Its stripper plates eliminate shelling in the field, and the low profile gets under

and picks up downed corn. It has a wide first elevator and aggressive trash rolls to eliminate plugging.

A powerful fan blows stalks and loose trash out the back before the ears reach the husking bed. The wide, 8-roll husking bed improves husking, while the 3 sets of the nylon husk brushes keep corn moving across the bed.

A large trash auger below the husking bed tumbles the husk over a perforated floor to separate and save any shelled corn. A lightweight, aluminum belt conveyor gently moves clean ears to the wagon.

"We needed a picker for our farm that did not leave shelled corn in the field and that left more kernels on the ears," says Stoltzfus. "We wanted one that did a better husking job than the older pickers still available and also one that was not as big and heavy as a 2-row picker."

The Houston Run picker achieves those goals and then some. It can be pulled by as few as 3 horses when the side chute is added, and a wagon is pulled alongside. When pulling a gravity box behind the picker, a 6-horse hitch is most common.

The picker has met the challenge of picking in difficult conditions, says Stoltzfus. "A few years ago, we had an extremely wet fall, but



Jonas Stoltzfus used his years of experience with corn pickers to develop a new one row picker.

that year's prototype (one of 6 developed since 2014) handled it well. We picked some that were almost flat."

Stoltzfus has even picked silage corn without a problem. He is confident the picker will be able to handle all types of older varieties that are more trashy than modern hybrids.

After 7 years of development, the picker is coming to market. "We are introducing it this fall," says Stoltzfus. "Prices start at \$27,000 for a pto drive unit."

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Negen's pto chipper/generator has an extended hitch and longer pto shaft.

540 Pto Converted To 1,000 Rpm

When Tony Negen upgraded tractors, he lost the use of his chipper. The older Kubota had a 1,000 rpm pto and the new one only had a 540. He solved that problem with a combination of jackshafts and pulleys. In the process, he realized he could drive a generator off the modified pto as well, so he extended the chipper platform with a slide-on mount for the generator. Since then, he also modified a leaf vacuum so it can slide on in place of the generator when it is needed.

"I used a jackshaft and a combination of pulleys that let me gear up the pto speed for the chipper," says Negen. "The same drive belt is used for the chipper and the

generator."

Getting the right pulleys in place was easy for Negen. "I turned the problem over to my engineer son in Michigan and told him to figure it out," says Negen. "He put the formulas together, and I followed them."

He wanted the best fuel economy when running the equipment. The Kubota normally runs full throttle at 2,640 rpm. The pulley combination lets him idle it down to around 1,800 while still achieving the right speed for both attachments.

Following his son's formulas, Negen mounted a 12-in. driveshaft to the pto drive and ran a belt to a 4-in. drive pulley on a 1-in. jackshaft. An 11 1/2-in. pulley at the other

end of the jackshaft drives a 7 1/2-in. pulley on the chipper. He put a 3-in. pulley on the generator to be driven by the same belt as the chipper.

The frame the generator slides onto is made from square tubing to match the original frame of the chipper. The mount is made with salvaged 1-in. tubing and angle iron. The angle iron base on the generator slides into the mount.

Negen hinged the generator to its base to make the drive belt self-tightening. A spring-loaded pulley keeps tension on the drive belt from the pto shaft and on the belt to the chipper.

"I have a little slippage on that first belt," says Negen. "I went with a 1/2-in. belt, but I think a 5/8 would have been better when the

generator is under load. It can stretch when it is driving 6,000 volts with that 9,000-volt generator."

Negen designed the slip-out mount for the generator so he could remove it when using the dust producing wood chipper.

Adding the various attachments to the same base has been interesting, but Negen admits he wouldn't do it again.

"I would just put the generator on its own cart," he says. "I only get the chipper out every few years, plus I have to take the bearing off the chipper to remove the belt. I could avoid that completely."

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Detail shows the belt running both the chipper and generator.

Solar-Powered Pond Aeration



Solar aeration works well for ponds without access to power.

Farm pond aeration minimizes algae growth, keeps fish alive, and reduces unpleasant odors, among other benefits.

But many ponds are in remote locations without power. "Often, solar aeration is the best and only choice," says U.S. Solar Mounts owner Eric Pipkin, whose off-grid solar-powered aerators use high-efficiency air compressors to agitate ponds.

Solar aeration systems usually run around \$7,000. That's often 2 to 3 times what you'll pay for a conventional system, but most owners recoup these costs within a few seasons of use.

U.S. Solar Mounts prides itself on the depth of experience it offers to customers. "We bring 20 years of commercial electrical background and expertise to these products. We guarantee they are high quality."

The company has 3 standard systems or you can have one custom-designed for your pond. You'll receive everything you need to get started except the mounting pole.

Pipkin says the installation process is straightforward. "If you can use a wrench, you can put this system together. In fact, the hardest part for everyone is digging the hole for the mounting pole."

Other leading solar aeration companies include Outdoor Water Solutions (866 471-1614; www.outdoorwatersolutions.com) and ProLake Professional Lake Management Products (800 493-4831; www.prolakeproducts.com). Both brands will work with you to determine which aeration system best suits your pond, so you make the best purchase decision for your property.

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