

Add-On Kit Keeps Corn Off The Ground

The Kernel Keeper pays for itself keeping corn kernels in the header and off the ground. Dave Hockemeyer, Davaus (Vol. 43, No. 1), estimates that a single kernel saved per sq. ft. across 1,200 acres provides a net return over the \$2,100 cost for the Kernel Keeper. Increasing net return is why he and Davaus co-founder Austin Ehle developed the Kernel Keeper.

“What other industry leaves products on the ground?” asks Hockemeyer. “As margins get tighter, we’re trying to save every last kernel. We won’t completely prevent or eliminate shelling, but we’ve seen losses as high as six bushels per acre. We feel we’ll save from 1/2 bushel to 2 per acre, and that’s a conservative estimate.”

For Hockemeyer and Ehle, it was a personal and business decision to reduce combine header loss. In the past, they introduced the SeedRight Backer Plate, making it possible to plant small grains and cover crops with existing OEM seed plates and Kinze OEM brush-type meters. It was invented by an Ohio farmer. The Kernel Keepers is an in-house invention.

“As we rode in combines and looked down to see product on the ground, it was painful emotionally and economically,” says Hockemeyer. “We realized the dumbest thing



Black poly rail and brush on a gathering chain are part of the kit.

a person can do is to slam a nice, hard ear of corn against a piece of hardened steel, but that’s what we do with a combine.”

Hockemeyer and Ehle came up with a two-part solution. The first was to attach a UHMW poly rail to the hardened edge of deck plates to soften the impact and redirect

the ear. The second part was to add brushes to the gathering chain to sweep loose kernels into the auger.

They’ve assembled all the hardware needed in a kit, including a high-quality bit for drilling holes in the existing deck plates. The pre-drilled, poly rail is sized to avoid the hardest edge of the deck plates.

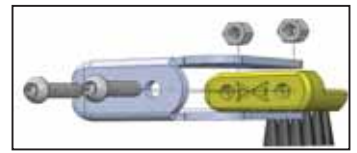
“The hardening fades away as you go inboard,” says Hockemeyer. “We offset the holes in the rail about 1/2 in. where the deck plate isn’t as hard.”

The 16 gathering chain brushes mount to two existing holes in each gathering chain finger. Two styles of gathering chains are practically universal across the combine header industry, and both feature the two unused holes.

“Installing the brushes is the easier part,” says Hockemeyer. “Just slide the nuts into existing pockets and insert the bolts.”

Installation is estimated at 20 min. per row unit initially, dropping to around 15 by the final row unit. That includes drilling the holes in the deck plate.

With holes already drilled, replacing rails will take only a few minutes each, but they’ll have to be replaced. “The rails take a beating and will wear out before the brushes do,” says Hockemeyer. “Our high-speed cameras show the ear hits generally in one area. The brushes wear longer.”



Kernel Keeper brushes are part of row kits.

Kits are priced at \$195 per row, with each set of rails harvesting about 150 acres before needing to be replaced. To calculate replacement time, multiply the number of rows by 150, i.e., an 8-row combine would cover 1,200 acres before the multiple sets of rails would have to be replaced.

Future kits may include pre-drilled replacement deck plates as well.

“With our current kits, you don’t have to replace deck plates,” says Hockemeyer. “Drilling holes in them is not difficult. We’ve done it many times as we developed these kits.”

Kernel Keeper kits are being introduced for square edge, flat deck plate style headers. These are mostly Deere, but some other brands as well. Other styles are planned. The company will also be adding installation videos to its website.

Contact: FARM SHOW Followup, Davaus, 14508 Bruick Dr., Hoagland, Ind. 46745 (ph 260-245-5006; www.davaus.com).

Robot combines a snowblower, lawn mower, and leaf blower as separate attachments.



Yard Robot Tackles Outdoor Chores

The Yarbo 3-in-1 yard robot was designed and built by Yarbo Inc, a New York-based innovative technology company. It can work as a snow blower, lawnmower, and leaf blower, all with minimal human control.

Yarbo operates through a wide-coverage wireless network that lets you control the robot and check its status from anywhere in your house. You can start and control it from the smartphone app and monitor its progress in real-time.

The app offers different modes, depending

on the work type, each with a separate working plan and map. You’ll first need to take the Yarbo for a “yard tour” to set up a virtual boundary. From there, it’s possible to add multiple working zones, no-go zones, and connecting paths between them. You can assign the robot multiple work zones at a time, so long as connecting paths exist between them. The robot is equipped with a PPVS (Precise Positioning Vision System) and an obstacle avoidance system, allowing it to operate in low light conditions and even

complete darkness. Two front lights will alert others nearby that the Yarbo is working.

The base Yarbo can be paired with three different attachments. The Lawn Mower M1 includes a built-in camera and sensors that can detect and avoid obstacles in its path. The large signal area coverage lets it manage multiple zones, and it can handle up to a 68-degree slope. The blades are adjustable for a cutting height that ranges from 1.2 in. to 4 in. When the job is done (or the battery is low), the Yarbo returns to its wireless power station. It also includes a portable charging station on top for personal electronics.

The Blower B1 works for leaves and fallen debris. It has an airflow capacity of 424 cu. ft. per minute and a tube that rotates 360 degrees to ensure your leaves end up where you want them.

The Snow Blower S1 is powerful enough for wet, dry, and packed snow. It boasts an adjustable throwing distance with a maximum of 40 ft. It has a 180-degree rotating shoot and 45-degree shoot angle. A vertically articulating attachment allows Yarbo to travel from a low surface to a high

surface. The snow blower weighs 143 lbs., providing traction and flexibility for easier handling.

Yarbo is powered by a lithium battery with a 1382Wh capacity. It takes about 2 hrs. to reach full charge, which may increase in cold conditions. Likewise, operating time varies considerably by task. The Snow Blower S1 can run for 90 mins. in a snow depth of 5 in., while the Lawn Mower M1 can run for 120 mins.

The robot also comes with an anti-theft function through GPS tracking. If a Yarbo leaves its virtual boundary, the anti-theft system is triggered and sends alerts to the app, while the robot itself will issue a warning sound and flash its lights.

Yarbo is available for pre-order for \$6,999 plus \$4,799 for the Snow Blower S1, \$4,399 for the Lawn Mower M1, and \$4,199 for the Blower B1.

Contact: FARM SHOW Followup, Yarbo, 1951 Ocean Avenue Unit 3, Ronkonkoma, N.Y. 11779 (ph 631-818-1850; contact@yarbo.com; www.yarbo.com).



SW3100, equipped with a pto pump, can support multiple steam delivery attachments.

Steam Weeder Runs Off PTO

The saturated steam weeding system from Weedtechnics has been upgraded with more powerful systems and a pto-drive pump, allowing a narrow-row-friendly trailer. Trademarked as Satusteam, the units boil

water under pressure (up to 500 psi) and then release the boiling water and steam at 208 to 212 degrees but under low pressure. The water-saturated steam explodes plant cells on contact without impacting soil and other

materials around the plant.

“Weedtechnics hasn’t changed how it makes the saturated steam, but the company has expanded the range of models and applicator heads it offers,” says Dan Dows. “The pto-powered pump eliminates the need for a diesel-powered pump, lowering the price by several hundred dollars and reducing the unit’s footprint on a trailer. That allows for a narrower trailer for use between rows.”

Dows is a distributor and user, contracting with municipalities on weed control in sensitive areas and with the horticulture industry, in particular, organic fruit growers. During the recent COVID pandemic, he also provided Satusteam sanitizing in commercial areas of hospitals and healthcare organizations.

“We’re doing vegetation control in organic berries and vegetables, as well as targeting invasive species along bodies of water,” he says.

The one attribute that sets Weedtechnics technology apart from other weed control is it destroys any soft-leaf green vegetation. In addition to cell damage, it gets some penetration into meristematic areas of the plant, providing longer residual than other

control methods.

“There’s nothing we haven’t been able to control,” says Dows. “With the larger systems, we can do multi-row applications. In vineyards, vegetable fields, and fruit like blueberries, we can do up to two rows, both sides, in a single pass.”

In addition to weed control, the Satusteam can clean and remove gum, gunk, and grime without damaging painted or timber surfaces. The price of the SW3100 without a trailer is \$42,990. Mounted on a horticulture trailer with applicators, it’s priced at \$94,990.

“We keep finding new fits for Satusteam,” says Dows. “We’re now providing weed control to the Christmas tree industry.”

Dows suggests U.S. readers contact Weedtechnics U.S. distributor, Dave Johnson, at Steam Cleaners.

Contact: FARM SHOW Followup, Steam ‘N’ Weeds, 2502 10th Ave., Wainwright, Alberta, Canada T9W 1W3 (ph 587-437-8326; info@steamnweeds.com; www.steamnweeds.com) or Dave Johnson, Steam Cleaners (ph 800-648-1118; www.steamcleanersinc.com) or Weedtechnics (toll-free 888-783-2655; support@weedtechnics.com; www.weedtechnics.com).