Grain Grabber 2 helps run the reel up higher and out of the crop, reducing shatter and increasing overall yields.



Combine Attachment Improves Grain Feed

Grain Grabber 2 by Reitzel Tractor will transform an auger into a full-finger auger for pennies on the dollar. "Kenny Reitzel actually invented these," says Elli Altaffer, Reitzel Tractor, LLC representative. "They're a special attachment you can put on your combine head. It helps with combining and reducing slugging."

The Grain Grabber 2 helps run the reel up higher and out of the crop, reducing shatter and increasing overall yields. This feeds the grain evenly, reduces slugging, and makes it possible to run longer at night.

Grain Grabbers are sold individually and in kits with all necessary hardware. Each kit consists of the Grain Grabbers, four washerheaded, self-tapping bolts per grain grabber (plus two extras), and a 15/64 drill bit. The pieces are easy to install, made in America, and designed to fit most grain head brands. Each base is 2 1/2 in. by 6 1/4 in. and 4 in. tall at the top of the point.

The kits range in price from \$192 (20 ft., six Grain Grabbers), \$256 (25 ft., eight Grain Grabbers), and \$320 (30 ft., 10 Grain Grabbers). Individual orders (\$32) contain one Grain Grabber, a 15/64 drill bit, and six bolts. The orders include complete assembly instructions. "They're manufactured locally," says Altaffer. "We ship all over the USA and Canada"

Interested readers can contact Grain Grabber directly for personal guidance. "Kenny has figured out how many a person needs depending on the head size," says Altaffer. "We even offer them in red, green, or black, depending on the brand or preference. We'll help guide installation as you need to install them correctly to benefit feeding."

Contact: FARM SHOW Followup, Reitzel Bros. LTD, 11977 State Route 49, Edon, Ohio 43518 (ph 419-272-2680; graingrabbers@reitzels.com; www.graingrabbers.com).

Robotic Picker Harvests Apple Orchards

Advanced Farm Technologies, Inc., a California-based robotics company, is building on the success of its robotic strawberry pickers by introducing its machines to the apple-picking industry.

"Our mission to automate the toughest tasks in farming now extends to tree fruit with our robotic apple harvester," says an Advanced Farm promotional release. "By reusing the majority of our custom technology from how we harvest strawberries, we've gained a lot of momentum after just one season."

The company is conducting field tests on Central Washington apple farms using their modified machine.

The 14-ft. tall robot is built **from brui** to fit within current orchard operations, harvesting rows 9 to 12 ft. wide. A hybrid electric drive system powers the

fuel-efficient, lightweight robot, which avoids contact with trees, branches, and other objects.

A central computer controls the motions of six robotic arms and runs the robotic apple harvester. Suction cups are fixed to each arm to eliminate bruising the produce. Cameras locate and assess apples for ripeness and size before an arm is extended to pick the fruit.

Advanced Farm Systems Engineering Manager Michael Corsetto says, "The arm can go in and out, side to side, plus twist up and down. When it sees an apple it wants, it'll go into the canopy, pick it with the suction cup, and then return."

Picked apples are placed into a conveyor system for a human to clip the stems. Human workers are still required to remove the stems, which can puncture the skin of



A central computer controls the motions of six robotic arms and runs the robotic apple harvester. Suction cups are fixed to each arm to prevent the produce from bruising.

other apples, as the robots cannot complete this task.

After the stem is clipped and the apple is inspected, it's transferred into a holding container that can be set on the ground for later pick-up.

The apple-picking robots are now available in Washington. Commercial trials on several varieties have been completed this year in the Columbia Basin.

"We've already seen massive improvements this year compared to last," says Director of Business Development Peter Ferguson. "Our picking speed has risen dramatically with peak speeds of almost 2,500 apples per hour."

Contact: FARM SHOW Followup, Advanced Farm Technologies, Inc., 27993 Mace Blvd., Davis, Calif. 95618 (ph 530-564-8444; https://advanced.farm/).



Powered by a Honda 4-cycle engine or a Makita 40-volt MAX XGT batterypowered motor, the SiBore easily drills through almost any type of soil.

Drill Designed For Horizontal Digging

MiniTrencher has introduced their SiBore Drill, a horizontal boring tool for digging underneath concrete, sidewalks, or other solid surfaces in an industry still heavily reliant on manual digging.

"Following the shift in green industry trends and market demands, MiniTrencher is unveiling new products and attachments, including a horizontal auger and a new electric battery-powered division," says Debra McNamara, MiniTrencher marketing professional.

The handheld trenching drill doesn't need water, eliminating any messy cleanups.

Powered by a Honda 4-cycle engine or a Makita 40-volt MAX XGT battery-powered motor, the SiBore easily drills through almost any type of soil. After the job is completed, they're small and light enough to be transported in the trunk of a car.

The units come in three models, each with the standard gas-powered engine or the cordless Makita battery-powered option.

The SB216 and 216e drills feature 2 and 4-in. dia. augers with 32-in. extensions up to 12 ft. The SB215 and 215e are suitable for micro-boring with 24 ft. of 1-in. augers. The larger SB431 and 431e contain all the components of their counterparts in one tool.

Accessory drilling bits range in size from the 1-in. drill tip to 2 to 8-in. augers and 36-in drill rods

"Our trenching attachments are the industry standard for shallow-depth, narrow-width trenches for irrigation, landscape, erosion control, electrical, plumbing, and fiber optic applications," McNamara says.

The SiBore Drills are available directly from MiniTrencher or their 130+ U.S. dealers.

Depending on the model, prices range from \$5,260 to \$6,947 plus S&H.

Contact: FARM SHOW Followup, MiniTrencher, 815 NE 172nd Ave., Vancouver, Wash. 98684 (ph 877-694-0141; info@ minitrencher.com; www.minitrencher.com).



"It can carry up to 350 lbs. up a 15-degree incline and last 8 to 10 hrs. on a single charge," Cullen says. "It has a variable speed throttle that goes up to 3 mph and has forward and reverse."

Power Wheelbarrow Moves Loads With Ease

Chip Michel and Tom Cullen had the idea of a power-assisted electric wheelbarrow as they struggled and spilled while pushing wheelbarrows of cement to pour into post holes. Michel made the idea a reality in his Minnesota shop, and 15 years later, the Chore Warrior helps DIYers, contractors, and others.

Cullen, CEO of operations, says that as the first manufacturers of power-assisted wheelbarrows, their patented design includes many well-thought-out features.

"It can carry up to 350 lbs. up a 15-degree incline and last 8 to 10 hrs. on a single charge," he says. "It has a variable speed throttle that goes up to 3 mph and has forward and reverse." The 24V battery has more power and is much less expensive than lithium-ion batteries in other power assist models.

The 15-in. pneumatic tires are balanced in the center for stability, which reduces the weight feel to about 30 lbs.

"You're not balancing the load, and you're not the engine. The dump brace in the front takes the momentum of the load so you can accurately dump it," Cullen says.

Customers say the Chore Warrior eliminates back problems and strains. Companies buy multiple units for employees for fewer injuries and workers' compensation claims.

Workers can also move things over septic fields and around sprinkler systems, where larger equipment can't go.

"We sell a lot to people with cabins. A load of firewood can go through a doorway or gate," Cullen says. Hunters use the Chore Warrior to haul out deer.

Customers can customize the wheelbarrow with different tires, such as the mountain/beach wheel assembly, which works well in snow or sand. A "no flat" wheel assembly prevents flat tires on sharp surfaces. The wheelbarrow costs between \$600 and \$800.

Instead of the heavy-duty, 6-cu. ft. poly tray, some customers opt for a deck to mount another container, such as a 100-gal. tank to haul maple syrup or solar panels to provide power for remote work.

Built with a 17-gauge steel frame, Chore Warrior comes with a 1-year warranty. Unlike other models, which can't be used if the battery dies, the Chore Warrior can be pushed like a regular wheelbarrow.

It's available on Amazon, in many big box stores, and through the St. Paul business.

Contact: FARM SHOW Followup, Power Assist Technologies, 926 Dale St. N., St. Paul, Minn. 55103 (ph 651-370-7508; tom@pwrassist.com; www.chorewarrior.com).