

# Horse Progress Days Showcases Innovation

FARM SHOW contributing editor Jim Ruen recently attended Horse Progress Days, held near Mount Hope, Ohio. An amazing array of horse-drawn farm equipment was on display and at work in the fields. Most equipment shown here is powered by a "forecart" with engine-driven hydraulics and/or pto. Although geared to horses, some of the equipment could also be used behind a pickup, ATV, or older tractor.



This 1,000-gal. liquid manure spreader from ELS sells for \$3,870 with ground or pto drive and is equipped with a gravity baffle. Other sizes range from 600 to 1,600 gal.

Contact: FARM SHOW Followup, ELS Manufacturing, 5270 Amish Rd., Kinzers, Penn. 17535 (ph 717 442-8569).



Boomtown Sprayer Shop makes this ground-driven, yellow poly, 500-gal. honey wagon tank. It's priced at \$2,100, but Boomtown will custom make any size.

Contact: FARM SHOW Followup, Boomtown Sprayer Shop, 4485 TR 606, Fredericksburg, Ohio 44627 (ph 877 485-2169).



Boomtown also demonstrated this 110-gal. Hi-Rise Sprayer for produce, field crops and orchards. Equipped with a Honda motor, it produces 9.5 gpm and up to 580 psi with 24-ft. booms for up to 57 ft. of coverage. Booms can be raised to a 6-ft. height to spray corn. It's priced at \$1,982.

Contact: FARM SHOW Followup, Boomtown Sprayer Shop, 4485 TR 606, Fredericksburg, Ohio 44627 (ph 877 485-2169).



Charm Engine makes these auto starts and shut offs. They can be wired to work from a pressure sensor for pumps or a temperature sensor for engines. Units will attempt to try to start an engine for 10 to 15 seconds (starting times can be preset) and, if not successful, will shut down so they don't burn up battery or starter. Switches can also be activated by timer or by manual override. Auto delay lets the engine start up before applying the load of a generator.

Contact: FARM SHOW Followup, Robert Shettler, Charm Engine, 4741 State Route 557, Millersburg, Ohio 44654.



This motor-powered, horse drawn New Holland haybine was an example of tractor-powered equipment that has been adapted successfully for horse-drawn use, thanks to forecarts. Other equipment at the show included hay tedders, rakes, balers and a four-bottom plow.

Contact: FARM SHOW Followup, Lowe & Young Inc., 7058 E. Lincoln Way, Wooster, Ohio 44691 (ph 330 262-6111; www.loweandyoung.com).



The Crop Roller, developed at the Rodale Institute and now being built by I&J Mfg., lays down and chops up crop residue, cover crops, or old hay crops prior to no-till or zone-till planting. The mat of residue it leaves on the ground holds down weeds. Units start at \$2,800.

Contact: FARM SHOW Followup, I & J Mfg., 5302 Amish Rd., Gap, Penn. 17527 (ph 717 442-9451).



The Yoder backpack transplant tool is a neat alternative to the expensive pull-type equipment used by large market gardening and produce growers. The hand tool is designed to open a space by pushing down on loose soil. The spade opens, and liquid fertilizer is delivered into the hole. The operator then drops a starter plant into the hole and tamps the dirt down around it.

Contact: FARM SHOW Followup, Yoder's Produce Supplies, 7000 Salt Creek Rd., Fredericksburg, Ohio 44627.



You can take 50 to 90 percent of the water out of laundered clothes and save drying time with a Charm Spinner. Electric powered (\$229) or pneumatic (\$459), the 3,200 rpm spinners are ideal for cabins or off-grid homes. Customers report spinning out clothes and hanging for only an hour or two before clothes are dry.

Contact: FARM SHOW Followup, Robert Shettler, Charm Engine, 4741 State Route 557, Millersburg, Ohio 44654.



Horse-powered treadmills are equipped with pto gearboxes and can be used to power everything from metal and wood working equipment to grain mills and water pumps.

## Horse-Driven Treadmill Power Unit

When FARM SHOW last spoke with Ammon Weaver (Vol. 27, No. 3), he was starting to build a few horse-powered treadmills with pto gearboxes for neighbors. The first one he ever built was used for making ice cream and powering the family washing machine.

"It's still a sideline to our metal working business, but it's growing," says Weaver.

He uses high carbon axles with flame hardened wear areas, sealed ball bearings and high carbon web chain side plates on the treads. Webs are standard with a constant plane or with an optional stair step web that gives horses a flat surface to step on. White oak treads or optional rubber belting is used on the treadmills.

The treadmills offer two speeds, 30 rpm's and 120 rpm's. A special two-speed gearbox Weaver developed increases output speed to 1,750 or 3,600 rpm's as needed to meet most pto drive requirements. Weaver estimates the output, depending on ramp angle, governor speed and the weight of the horse, at 1/2 to 1

1/2 hp per horse.

At the recent Horse Progress Days, Weaver demonstrated one and two-horse treadmills powering everything from metal and wood working equipment to grain mills and water pumps. He even had one connected to a condenser for refrigerating food.

To avoid the stop/start that can occur with horse-driven power, Weaver hooks the treadmill up to an air compressor. Air from the tank is then piped to a variety of wood working tools.

"We're even building a special shop that will run on horse power for making the gear boxes," he says.

Single horse treadmills are priced at \$2,800. Double horse units are priced at \$3,000. The high rpm gearboxes are priced at \$675.

Contact: FARM SHOW Followup, Ammon Weaver, Athens Enterprises, 1821 Matherly Road, Liberty, Ky. 42539 (ph 606 787-8474).

## Big Bale Retriever Powers Itself

Moving big round bales is fast and easy with this self-powered bale carrier that's designed for use with horses but could also be used behind pickups or tractors without hydraulics. It was demonstrated at Horse Progress Days in early July. The 19-ft. long unit can handle up to four 4 by 5-ft. bales per load, loading and unloading quickly.

"If bales are within 50 ft. of each other, I can load four in less than two minutes," says Nelson B. Weaver, Trail Farm Supply. "Unloading is fast too, as they drop off in line."

The key to the speed is the smooth working hydraulics that pick up the bale, swing it into place and drop back to get the next bale while the operator moves the first one out of the way. Although only powered by a 5 1/2 hp motor, the two-stage hydraulic pump provides plenty of power, automatically shifting gears as needed.

The hydraulics also power the brakes on the Pioneer brand wagon gear. The brakes, like the barriers protecting the operator, add safety to the unit.

The bale fork arm is made from 4 by 4-in., 1/4-in. thick steel tubing. The forks themselves are 3 by 3-in. tubing. The outside fork is longer than the inside fork, with the extra length bending away at a 30° angle. The extension lets the operator approach a bale that



Self-powered bale carrier is designed for use with horses but can also be used behind pickups or tractors without hydraulics.

is perpendicular to the line of travel and push it in line for the forks.

"When you are loading on a hillside, you can travel across the slope instead of up and down," says Weaver. "That makes it easier on the horses."

Weaver sells the units for \$7,300. While sized for 4-ft. long bales, the arms can be adjusted for 4 or 5-ft. dia. bales.

Contact: FARM SHOW Followup, Trail Farm Supply, 3251 TR 414, Dundee, Ohio 44624 (ph 330 893-1918).