

What's New In Europe?

We recently sent FARM SHOW contributors Jim Ruen and Andrew Sewell to Agritechnica in Hanover, Germany, one of the biggest farm shows in the world. More than 2,700 exhibitors showed their stuff to 419,000 visitors from all over the world.

Electrification Of Ag Equipment

Converting from hydraulics to electric power cuts fuel costs by 25 percent, say European companies which have been rapidly developing electrified equipment. Deere, Rigitrac and Same Deutz-Fahr all exhibited tractors with built-in generators.

"Mechanical and hydraulic drive units are only 65 to 70 percent efficient," explains Ruben Abajo, a product marketing manager at Deere. "Electric motors are 90 percent efficient and electric power is safer and more flexible, offering better control and instant torque. It's the trend of the future."

Deere's 6210RE tractor goes on the market this spring. Its integrated generator mounts on the engine crankshaft ahead of the transmission. It uses only 10 percent of available horsepower to produce electricity to power implements. Optional 230V or 400V outlets are available for operating welders, angle grinders, and other tools.

Rigitrac, a small Swiss company that custom-builds 25 to 30 hydraulic-drive tractors each year, introduced a prototype diesel/electric tractor (www.rigitrac.ch).

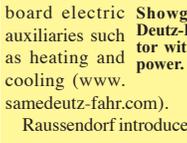


Photo shows electric outlets on back of Deere 6210RE tractor, which has a built-in generator.

Equipped with all-electric wheel drives, the EWD120 has no transmission or drive train. It does have all-wheel steering and a top speed of 40 mph.

In addition to providing power for its own drive, the diesel/electric also provides 80 kW for implement drives or other uses.

Same Deutz-Fahr displayed a prototype Agrotion TTV 630 tractor equipped with an electric motor integrated into the transmission housing. Depending on the size of the motor used, it will produce 50 to 70 kW of power. Power is available for implements and/or on-board electric auxiliaries such as heating and cooling (www.samedeutz-fahr.com).



Cables feed electric power to electric motor in wheel hub on Rigitrac electric-powered tractor.

Raussendorf introduced a pto-driven front-mount electric power pack that produces 45 kW of power to power electric implements with a conventional tractor. The operator can adjust output from 1 to 100 kW. It's priced at about \$23,500 (www.raussendorf.de).



Raussendorf introduced a pto-powered generator that mounts on front of tractor to drive electric-powered implements.

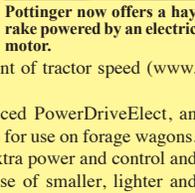
Electric-Powered Implements

Rauch showed an electric-powered fertilizer spreader that offers more precise spreader control regardless of engine speed. The agitator, dosing controls, and motors are powered by 12V low voltage, while the spreading discs are powered by 400V motors (www.rauch.de).



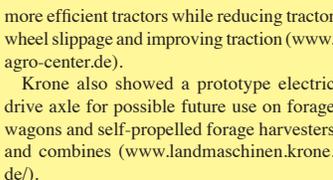
All-electric spreader offers precise control.

Pottinger has equipped its EuroTop421W single rotor hay rake with an electric motor that offers infinitely variable rotor speeds independent of tractor speed (www.pottinger.at/en).



Pottinger now offers a hay rake powered by an electric motor.

Fliegl introduced PowerDriveElect, an electric drive axle for use on forage wagons. The axle offers extra power and control and will permit the use of smaller, lighter and more efficient tractors while reducing tractor wheel slippage and improving traction (www.agro-center.de).



Electric drive axle is designed for use on forage wagons.

Krone also showed a prototype electric drive axle for possible future use on forage wagons and self-propelled forage harvesters and combines (www.landmaschinen.krone.de/).

Combine Cab Toy Display

A model toy maker found an innovative way to display his collection of Massey Ferguson toys by mounting an MF combine cab on wheels and fitting it with display shelves. The big windows make the toys easy to view but keep people from handling or walking off with them. One other benefit is that you can match the model of cab to the brand of toys on display.



Massey cab displayed MF toys.

Attention-grabbing square-wheeled tractor.

World's First Square Wheels

German tire company Bohnenkamp got a lot of attention for fitting a Schuler tractor with "custom" square wheels. Bohnenkamp used the first-of-their-kind tires to make the point that "even though we can't reinvent the wheel, there is always room for innovation in the tire business" (www.bohnenkamp.de).

Silent Drive Feederhouse Belt

Dutch company Broekema drew in crowds of farmers with its new "Silentium Drive" feederhouse belt that replaces high-maintenance, noisy roller chains. Combines of any major brand can be converted from steel roller chain to the new fabric-reinforced rubber belting. Benefits include drastically reduced noise level, smoother conveying action, elasticity if foreign objects are sucked in, and less overall maintenance due to longer life of the belted parts (www.broekema-usa.com).



Feederhouse slats attach to reinforced rubber belts instead of metal roller chain.

Walk-Behind 1-Row Vacuum Planter

If you've got a few acres to plant but not enough to justify a tractor planter, you might like this walk-behind vacuum precision planter from Italy. Seed discs are available to plant everything from tiny carrot seeds to corn and beans. Powered by a 4 hp gas engine, it has two drive wheels and an adjustable packer wheel on back (www.maternacc.it).



Planter can be used with any size seed.

Wedge Rollers Speed Up Splitting

An Austrian company that makes a wide variety of splitters, wood processors, saws, and other handling equipment says its new roller-equipped splitting wedge keeps soft wood from jamming during the return movement of the wedge, speeding up splitting of big logs especially in its vertical tractor-mounted splitter. The optional 2-part wedge (as shown in photo) allows small blade to be lowered to hold log in place before hydraulic pressure is applied (www.



Rollers on 2-part splitting wedge keep wood from binding up on return stroke.

"Slave Tractor"

Automated, driverless farm equipment was on display everywhere at Agritechnica, including a "slave tractor" setup shown by Fendt, which is part of AGCO. Called "GuideConnect", it allows the operator of one tractor to control a second tractor following behind. The tractors can be easily "detached" for other uses but when performing tillage, planting or spraying jobs on big fields, one operator can get twice as much work done in the same amount of time (www.fendt.com).



Automated controls allow driver in front tractor to control second "slave" tractor that follows behind.

Big Bale Dryer

Kongsild showed off its Ventus 2400 big bale dryer that uses low friction "drying spears" to inject heated air into bales. The spears are spring-loaded to add flexibility as they're inserted from the side into bales that pass by on a conveyor. Heated drying air is pulled in by a large rotary blower. Drying times depend on wetness of bales but the distribution of injected air throughout the bale allows very wet bales to be evenly dried, according to the company (www.kongsild.com).



"Spears" inject heated air into bales.

Innovative Dutch Cattle Crossing

While driving through Holland on the way to Agritechnica, FARM SHOW's British contributor Andrew Sewell stopped to photograph an innovative cattle crossing. The owner of this 100-cow dairy farm has pasture land on both sides of a little-traveled country road. He wanted to give cattle free access to both sides of the road without having to move them himself. So he put in a cattle crossing with cattle guards (made with lengths on concrete rebar) on each side of a walkway. Fence sections help funnel cattle through and cattle crossing highway signs warn motorists to be on the lookout. Andy says cows and cars seemed to get along fine.



Crossing lets cattle freely move between pastures.

