

# Look What They're Doing With Rubber-Belted Tracks!



This new Challenger 45 tractor is fitted with 18-in. wide belts.

## Caterpillar Unveils First Belted Row Crop Tractor

One of the hottest new products at the recent Farm Progress Show in Iowa was Caterpillar's prototype "row crop" rubber-tracked tractor.

The Challenger 45 is one model in a line of tractors designed to compete with front wheel assist tractors and small 4-WD tractors in the 150 hp to 250 hp category. It's slated to go into production in 1995 and will be available with 16, 18, 20, 25, and 32-in. wide belts.

"It has several features that make it different from our other Challenger tractors," says James Oldham, program manager. "The first thing you notice is the big drive wheel that elevates the wheel axle for crop clearance. Some people think that makes it look much more like a conventional tractor. The main frame and transmission are an integral part of the tractor, not separately mounted like they are on the other Challengers. The rigid roller frame allows the roller and belt system to bridge over rough spots and rows that have been ridged. In level terrain the ride is similar to the large Challengers. The improved ride is most noticeable when compared to a mechanical front wheel assist tractor operating on rough fall plowed ground. The wheeled tractor will follow

almost every low and high spot in the plowed soil whereas the Challenger 45 will let you bridge over these spots with much less operator fatigue.

"Spacing between tracks can be varied from 60 to 90 in. by changing spacers between the chassis and track rocker frames. You can also change from one belt width to another so you can use the tractor for fall tillage work, planting, cultivating, etc.

"Because rubber belts offer improved traction and less slippage, the Challenger 45 provides drawbar performance equivalent to a tractor that has 12 to 14% more top horsepower. Even with narrow 16-in. wide tracks, ground pressure is as low as 9 psi - considerably below the ground pressure exerted by conventional wheel tractors. It's only 4 to 5 psi on 32 in. wide tracks."

The new tractor has a power shift transmission, 3-pt. hitch and pto, and state-of-the-art cab with many electronic controls. Oldham says it will be available in several models that will be cost competitive to front wheel assist tractors.

Contact: FARM SHOW Followup, Caterpillar Inc., Box 348, Aurora, Ill. 60507 (ph 708 859-6056).



Kelderman's direct-drive tracks have a built-in hydraulic suspension system.

## "High Drive" Row Crop Rubber Tracks

When Gary Kelderman at Kelderman Mfg. started working on add-on rubber half-tracks for row crop tractors, he had three goals in mind: 1) Use a large diameter drive wheel that would allow operation of tractor at near-normal speeds; 2) Equip the undercarriage with a hydraulic suspension system that would improve the ride; and (3) Provide an undercarriage that can be fitted with 20-in. wide tracks for row crop work and 36-in. tracks for tillage work or use on combines.

Kelderman says he succeeded at all three goals and showed off his company's new rubber track system for the first time at the recent Farm Progress Show in Iowa, mounted on a Deere 4850 2-WD tractor. Fitted with 20-in. wide Goodyear tracks, the add-on assembly mounts in place of the rear wheels. You remove the tire and wheel rim and bolt the track assembly's main 60-in. dia. drive wheel onto the hub. The main frame bolts to the tractor axle housing with additional support from outboard bearings on the axle.

"We've tested tracks for thousands of hours and are convinced they're the way to go," says Gary Kelderman. "The 20-in. wide tracks let you use a rubber-belted 2-WD

tractor for row crop work. The tracks have 1,500 sq. in. of contact area so ground pressure is only 4 psi. The large diameter drive wheel means you don't have to give up ground speed. And the hydraulic suspension system provides 2 in. of suspension movement to absorb shocks and eliminate the rough ride you normally get with direct-drive tracks. It's a computerized system that uses a hydraulic cylinder backed up by an accumulator and electronic sensor that keeps the system at the correct suspended height at all times. The tractor's main frame is free to move up or down independent of the undercarriage. Many farmers don't realize that a rubber track system without suspension tends to ride rough, especially on a hard surface. Our tracks actually ride smoother than conventional tires.

"Our track system can be used with front wheel drive assist tractors provided that you use one size smaller front tire to make the wheel ratios right."

Sells for \$19,700.

Contact: FARM SHOW Followup, Kelderman Mfg. Inc., 2686 Hwy. 92, Oskaloosa, Iowa 52577 (ph 515 673-0468).

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## Non-Powered Rubber Belted Running Gear

Gilbert & Riplo recently introduced an add-on rubber track system for combines (Vol. 17, No. 5). Now the company has announced a new non-driven rubber-belted running gear designed to mount on manure spreaders, spray tanks, and grain carts.

The tracked undercarriage bolts onto axles in place of wheels. Tracks are available from 20 to 36 in. wide.

Prices range from \$15,000 to \$25,000 depending on track width.

Contact: FARM SHOW Followup, Gilbert & Riplo Co., 4865 S. Ravenna Rd., Ravenna, Mich. 49451 (ph 616 853-2284).



Gilbert & Riplo's non-powered undercarriage can be fitted to manure spreaders, spray tanks, grain tanks, and other equipment.