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## Radial Tractor Tires--How Good Are They

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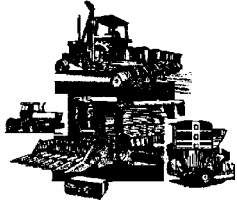
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# RADIAL TRACTOR TIRES HOW GOOD ARE THEY?

Farm Machinery Fact Sheet FM-23

By *Dr. Von H. Jarrett*, Extension Agricultural Engineer

(Are radials as good as they're cracked up to be? This special FARM INDUSTRY NEWS survey shows why most owners of B. F. Goodrich Powersaver radials are sold on the new concept tires, how they rate them in actual field use and why they plan to buy more.)

Not every buyer of the new radials will tell you he's 100% satisfied. But, based on a recent FARM INDUSTRY NEWS survey, we predict radial rear tractor tires will be the wave of the future. Most radial buyers we heard from told us they've run into few problems, notice a definite boost in traction, and like the radial's softer ride.

Most told us they expect these advantages, plus predicted longer wear, to more than return the extra initial investment of from 25 to 50% over conventional tires. Some say the radials offer a new alternative to duals, using weights, or even going to 4-wheel drive.

The company's new Powersaver is a tube-type tire with body cords running radially—from bead to bead—across the tire at a right angle to its direction of travel. It has a 400 lug angle, a 15% deeper tread than conventional tractor rears, and carries a rayon belt running around the tire (in direction of travel) between its radial cords and tread.

B. F. Goodrich introduced the Powersavers in four sizes, including 18.4 x 34, 18.4 x 38, 20.4 x 34, and 20.8 x 38.

How are farmers equipping tractors with the new radials?

Most radial tire buyers report they bought 18.4 x 38's, and only a few say they bought other sizes. Nearly all radials, according to the survey, were installed on 2-wheel drive tractors.

Most buyers say they went to the same size as the original tires on their tractors, with a few exceptions. Most who changed sizes went from 18.4 x 38's to 20.8 x 38's mainly because they needed more traction.

What about weighting? Most buyers handled weighting about the same way as with conventional tires. The bulk report using extra weighting, most going with liquid ballast. Some used a combination of liquid and tractor weights and a few say they used only tractor weights.

After installing radials, what changes did you notice compared to conventional tires?

Most buyers say they did not change size of equipment pulled after installing radials. One buyer reported that using the same equipment he was able to pull it much faster because of less slippage.

Here is a sampling of comments: “With the same size equipment, my actual mph in the field increased,” says an Iowa operator. “I run in the same gear—it seems like I get over more ground per hour,” said another. “I noticed less slippage, more traction and increased field speed.” “I used the same gear, but went 10 to 15% faster because of less slippage,” said others.

Like other radials, the Powersaver looks soft, like it needs air. “This,” says B. F. Goodrich, “is one of its main advantages”: The radial puts down a longer “footprint” than a bias-ply tire, putting more lugs on the ground to give the tires more bite. The bigger footprint keeps it from sinking as deep into the ground, so it doesn’t have as big a hole to “climb” out of as it turns.

Buyers told us it was easy to notice the “bigger footprint” and “extra flotation.” “It’s obvious there are more bars on the ground with the radial.” “It’s apparent the sidewall bulge of the radial means a bigger footprint.”

What outstanding features of radial tires do you like most compared to conventional tires?

The outstanding feature of radials buyers like most is more field traction. “The traction of these radials is noticeably better than conventionals.”

“Less slippage all around,” comments the farm users. “Radial traction is better under all conditions.”

Buyers say smoother ride is most obvious on frozen ground or rough terrain. “Radials don’t bounce as much.”

Do you think the radials live up to manufacturer claims?

When B. F. Goodrich introduced the Powersaver, the company promised it could increase tractor efficiency up to 20% by reducing slippage and boosting traction. “A tractor with the radials,” the company said, “would use as much as 10% less fuel, cover 20% more acreage through more traction, and would cut time spent in the field by 11%.”

We asked buyers how they rate the radial in categories of better traction, faster field speeds, less fuel used, less tire wear, more acres covered per day and less field time per acre. Nearly all report improvements in each of these areas, but seem most sure about better field traction and faster field speed.

A rough tabulation of buyer comments shows an overwhelming majority have no doubts about the Powersaver’s better traction. Nine out of ten will tell you they get less slippage in the field.

How long will it take radials to “earn back” their extra cost?

We asked radial buyers how much extra they paid for radials compared to conventional tires. Answers ran from a low of \$25 per set, all the way up to \$700 per set or more. However,

seven out of ten owners paid somewhere between \$100 and \$500 extra.

Most buyers predict the radials will last from a quarter to half again as long as conventional tires. A surprising number predict the radials will outwear conventionals by twice as long. Estimates are that radials will “earn back” their premium price range in from as short as immediately to two to five years.

Farmers buying a new tractor in 86 hp or up should have the option of buying radial tires. It's a shame to spend \$25,000 or more for a tractor, and then have to use conventional tires. If radials wig stand big power they will take over on tractors just like they did on cars.

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