

Soya oil to replace petroleum oil in tyres

By [Gerhard Scholtemeijer](#)

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Tyre manufacturer Goodyear has announced a technological development that will allow it to use soya oil to replace petroleum-based oil in its tyres. It plans to use the technology in North America for "consumer tyres" from 2015 and "then decide what additional use may be appropriate", the company says.

The company, which with Michelin and Bridgestone is one of the world's big three tyre manufacturers, says the development "could help consumers and the environment by reducing the amount of petroleum-based oil used in tyres while at the same time extending tread life".

It says tests at its Lawton, Oklahoma, centre show that the soya tyres "can potentially increase tread life by 10% and reduce the tyre maker's use of petroleum-based oil by up to 26,5m litres each year".

An extension of tread life will ease the perennial problem of disposing of old tyres, though a 10% increase by one manufacturer is not a comprehensive answer. Goodyear says its technology is patented and it has no plans at present to sell it to other tyre makers.

SA Tyre Manufacturers' Conference CEO Etienne Human says 275000t of "scrap" tyres are dumped in SA alone every year.

"It takes a while before all of that is collected and it is a huge problem," he says. "You can't use old tyres because the rubber has already been vulcanised, so they have no economic value. And there are huge transport-costs involved."

As an example he says a used industrial tyre that can weigh up to 4t might cost R12000 to transport and a further R8000 to shred. "That's R20000 to get rid of one used tyre."

SA waste-tyre regulations passed in 2009 put responsibility for disposing of used tyres on the manufacturer.

Human estimates SA's retail market for tyres at R25bn/year. More than 13m tyres are made in SA, and about 2m are exported, separately or on new cars.

Though Goodyear correctly points out that the use of "renewable" soya oil will make less fossil fuel necessary for tyres, it also means that yet another food crop is being harnessed for a nonfood purpose. Many commentators have blamed the use of maize for bioethanol, mainly in the US, as a cause of high food prices.

Soya beans are consumed by humans and also used extensively as feed in the livestock and poultry industries.

But the company defends its move: "Whole soya beans are predominantly crushed for their meal, which comprises 80% of the bean and is used predominantly as a feedstock in animal agriculture. The approximate 20% remainder is mostly oil. Based on US agriculture department research, increasing demand for soya oil benefits livestock feeders through lower meal prices."

It says "changes in US soya bean prices have had little effect on domestic food prices".

The United Soybean Board, a US farmers' body, has helped to fund Goodyear's research, granting it \$500000 over two years.

Gerhard Scholtemeijer of SA's Protein Research Foundation says Goodyear's new tyres are "just one of about 100 uses for soya beans". Soya is used to make biodiesel and printers' ink, among many other applications.

"We [the foundation] have close links with the United Soybean Board, who are just looking after themselves, but the big difference is that the US produces a surplus of soya beans and is therefore looking for export replacement. We still import soya beans and we are rapidly increasing our soya bean growing in our search for import replacement."

He estimates that "only by about 2020" will SA produce enough soya to supply its own needs.

"There was a drought last year and our 740000t produced was lower than expected. But the area planted to soya increased to a record 480000ha (from 430000ha the previous year) and we expect 500000ha-plus this year. We could get close to 1Mt of soya beans, but we'll still have to import."

Soya will also compete for "hectarage" with other crops, though, and Scholtemeijer expects wheat - a sector in which SA growers are battling - to be the biggest loser.

He believes SA's priority is "food security, not making tyres", with the demands of soya's biggest customer, the poultry industry, predominant.

"But whatever way you look at it, the soya farmer is in a win-win situation. Things can only get better for them."

Source: Financial Mail

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