

How safe is the food on your plate?

A new feature published on the University of Pretoria's (UP) Research Matters website focuses on the work by a team of researchers led by Professor Lise Korsten, who leads the food safety research programme at the DST-NRF Centre of Excellence in Food Security (CoE), which is co-hosted by UP and the University of the Western Cape.



Photo by Arturo Rivera on [Unsplash](#)

Together with her team of emerging and established researchers, Korsten - who is also co-director of the CoE - is investigating broad food safety-related concerns including how regulators can ensure that fruit and vegetables are free of potentially harmful pesticides, other agricultural chemicals and human and plant pathogens; how farmers can prevent contamination and reduce losses due to polluted water or human error; and, whether fresh produce from formal markets like retail stores are safer than fresh produce bought from informal traders.

In an ideal world, a farmer might sell a harvest of fresh produce to families nearby, who would eat that produce within the week. The more common reality in South Africa and the world, however, is that it can take up to three months or even more for food to travel from the farm to table. "The longer this supply chain, the less control you have over the product and the harder it is to maintain quality and safety," says Prof Lise Korsten.

“Our research helps ensure that fresh produce stays safe along that journey for as long as possible.” Korsten explains that many complex factors must be studied so that farmers, sellers, consumers, government and everyone in between have access to the best information available to make sure that food is safe to eat, wholesome and nutritious.

Other research in Korsten’s programmes considers postharvest spoilage or contamination of fresh produce that might make food unfit for human consumption, and how this could be prevented by best practices and more effectively regulated by authorities. “We’ve been trained to recognise spoilage and it can look disgusting,” says Korsten. She warns, however that unsafe food is not always easy to recognise - it could, for example, be contaminated by pathogens that are not visible, like *Escherichia coli* or *Salmonella* species.

Is fresh produce sold by informal traders safe to eat?

Another important focus of food safety research at UP is fresh produce sold informally, for instance from the back of a bakkie directly after harvest, or by informal traders who may have acquired produce not acceptable for formal markets.

Dr Stacey Duvenage, a postdoctoral researcher working with Korsten - and funded by the CoE - says preliminary research shows that at the point of sale, there’s not much difference in safety between fresh produce sold formally and informally - although more research along the supply chain is needed, this is good news for the millions of South Africans who rely on either.

This article is a slightly edited version of one originally published by [UP Research Matters](#).

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