

## Jozi teen wins top prize at Google fair

Johannesburg teenager Kiara Nirghin's drought-busting idea using avocado and orange peels has earned her the grand prize at the Google Science Fair. The awards, which attracted bright young scientists from around the world, were held at Google's Googleplex headquarters in Mountain View, California, on Tuesday.

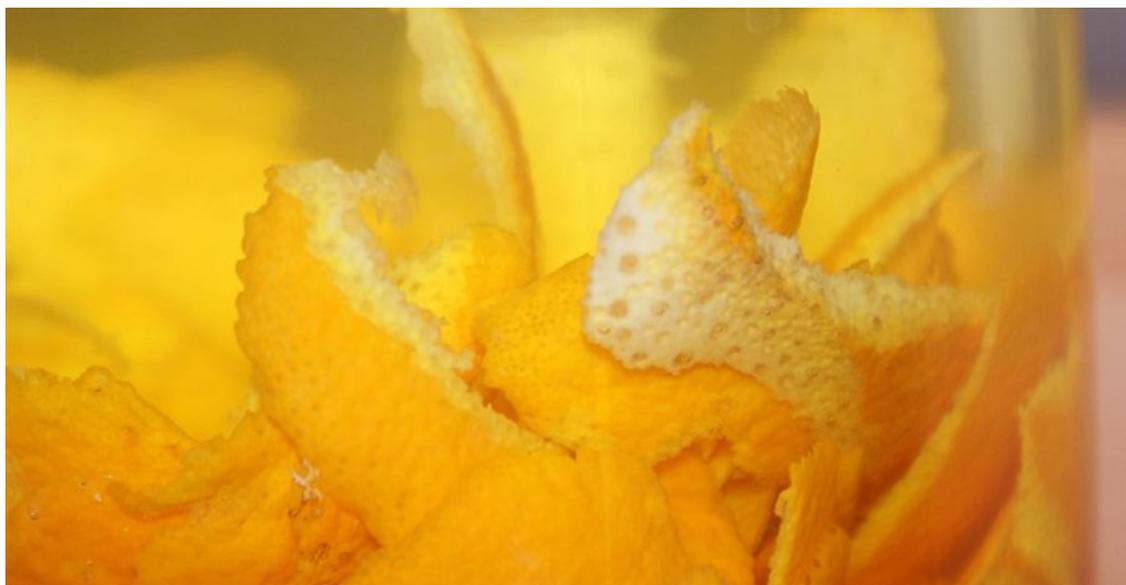
Nirghin, 16, a Grade 11 pupil at St Martin's School, discovered natural, super-absorbent polymers that allow soil to retain massive amounts of water. The idea won her \$50,000 (about R679,000) in scholarship funding at Google's sixth annual awards.

Before heading to the US, Nirghin, of Meyersdal in Johannesburg, said she had been researching when she came across the science competition on the internet. "Google always looks for people to innovate and help improve the country they live in.

"We are experiencing a drought and I thought it was something we should address," the pupil said. She studied the idea for about two months. "I entered because I thought it was a good idea, and so did my family. I didn't expect everybody to be so impressed by it," Nirghin said.

She found that most citrus fruit contained naturally occurring polymers. Orange peel contains 64% polysaccharides,

making it a candidate as a biodegradable polymer.



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Nirghin experimented with ultraviolet light and heat and added the natural oil found in avocado and boiled orange peels. After 45 days her experiments showed that the mixture could absorb 76.1% of water, supporting her hypothesis that it could increase soil moisture.

Chemical absorbents are not biodegradable and sell for R28,000 a ton. Nirghin's orange peel and avocado mix can be produced at R848 a ton.

She is expected to arrive back in Johannesburg from the US this afternoon. The Google Science Fair is a global online science and technology competition open to individuals and teams from ages 13 to 18. Earlier this year, Nirghin's research won her the Africa regional Google Science Fair Community Impact Award and R14,000 in prize money.

*Source: The Times*

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