

The New Zealand Herald

University of Auckland: World hungry for NZ apple flour

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A revolutionary apple-based flour developed at the University of Auckland could be on the local market next year – as international demand skyrockets.

Consumer appetite for the apple flour, created from fruit pulp normally dumped as waste, has taken its creators by surprise.

Biological scientists at the University of Auckland, Associate Professor Silas Granato Villas-Boas and PhD student Ninna Granucci, entered Ninna's PhD research under the company name of Green Spot in the university's Velocity \$100K Challenge – finishing runner-up.



Ninna Granucci. Photo / Supplied.

A story on their high-protein, low-calorie flour, derived from apple pomace (an apple by-product), appeared in the New Zealand Herald Brand Insight section. The article was picked up by at least 14 international media organisations and was even translated into French.

Granucci and Villas-Boas received queries from all over the world. With the flour still in the lab, they were unprepared for the outpouring of interest.

Supermarkets want to stock it. Vegans and gluten-intolerant people want to buy it. Cafes want to partner with them to make new products. Apple processing companies, who often have to pay to send the pomace to landfill, want to supply pomace. Investors want a piece of the pie.

"It was actually a bit scary," Granucci says, with Villas-Boas adding: "We realised alternative flours were actually quite trendy."

Non-wheat flours are a massive global growth area. Foodbev Media reported the total functional flours market could grow beyond a value of US\$800 billion by 2019.

This surprised the two scientists, originally motivated to solve the environmental problem of food ending up in landfill rather than fulfilling a market demand for alternative flour.

"As the population grows, the question is: 'How are we going to feed the world?' One idea is to produce more but another way to approach it is to waste less," says Villas-Boas.

"We've tried to replace wheat flour completely with this and it cooks well – the consistency is fine, it tastes great, the flavour is better," Villas-Boas says. "You can still make pastries and pasta but they will not have as many calories as common flour."

When they entered the Velocity \$100K Challenge, they had planned to look at commercialising the technology in 2017 – giving Granucci a year to finish her PhD. The clear demand for their product, however, combined with the fact the idea was out in the international arena, caused a change of tack.

Rather than waiting until Granucci finished her PhD, they decided to go into market validation for Green Spot immediately – not difficult, as the publicity gave them a substantial amount of leads.

They are currently negotiating a confidential investment agreement. Once terms have been finalised, Silas is confident they will be setting up a pilot plant to test the technology early next year.

"We did trials in the lab on a very small scale; you can cook with the flour, but we need to make sure we can scale it," Ninna says.

Consumer taste tests and cooking trials will also be an important part of the pilot plant process.

"If everything works, we can start planning a commercial plant in 2018," says Villas-Boas. "But, during the pilot stage, it is possible some Green Spot apple flour will end up in the local market next year."

The winners of this year's Velocity 100K Challenge will be announced at The University of Auckland Business School Wednesday evening.

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