

Mushroom company to make its own packaging - from mushrooms

Bonnie Flaws05:00, Jun 13 2019
STUFF

Packaging made from mushrooms, for mushrooms, is being tested in the hope that it will keep the fungi fresher for longer.

Christchurch mushroom growers, Meadow Mushrooms is trialling the packaging it has developed and made from mushroom stalks, for its own products.

The 50-year-old family business worked with Plant and Food Research and the Biopolymer Network to develop the punnet prototypes that have been designed to be breathable, keeping the mushrooms fresh.

The intellectual property is owned by the Biopolymer Network, which is owned by three research organisations, Plant and Food Research, Scion and Ag Research. Using publicly funded research grants it helps to develop products for commercial applications.



Meadow Mushrooms Marketing and innovation manager for Melanie Rushton says the new packaging material has also been trialled for use in disposable cups and plates.

The new punnets are being tested to see if they can offer the same, or better protection, while maintaining the freshness of the mushrooms. The punnets have a breathable coating which helps keep the mushrooms fresher for longer.

Biopolymer Network chief executive Sarah Heine said that organic waste from crop harvesting potentially has value if used in a more effective way. The companies had worked with the mushroom stalks for several years and its attributes like strength and printable surfaces made it a good choice for packaging.

The punnets should be fully home compostable, but have yet to be tested for this. However, Plant and Food Research scientist Ben Schon said there was no reason why it shouldn't be able to be composted at home.

Meadow Mushrooms, marketing and innovation manager Melanie Rushton said the company was at the stage of tweaking the quantity of mushrooms needed for the packaging, but hoped to buy machinery next year that could make enough punnets for use across its whole range.



Packaging made from mushroom stalks can swell up to absorb moisture in the environment without breaking apart.

The machinery was the same kind used to produce other fibre based packaging.

"It's compatible with conventional paper making processes. That's a key feature of it," Schon said.

The packaging takes advantage of a mushroom's ability to absorb water. This allows the packaging to absorb moisture from its surroundings, like a refrigerator and swell without losing its structural strength.

"That makes the punnets look a little bit unusual, but they get stronger," she said.



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Meadow Mushrooms plans to trial the packaging across its range.

This property has fascinated the scientists the company has been working with.

"It can absorb quite a bit of water as opposed to other natural fibres you might incorporate and it's able to stay strong. Instead of having the packaging fall apart it's able to maintain its strength," Schon said.

It could potentially protect the produce through the supply chain and into the home as well."

The material has also been trialled for use in disposable cups and plates, and it could even be used to package other produce, Rushton said.

"All going well we'll be able to get the machinery next year and look to roll something out late next year," Rushton said.