

Bumper harvest for GM purple tomatoes

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GM purple tomatoes developed by John Innes Centre scientists in the UK are being harvested in Ontario, Canada, for future research and to attract interest from private investors.

The 5000 square-foot glasshouse will yield enough tomatoes to produce 2000 litres of purple tomato juice. It will be used to generate new research and industry collaborations and to start the process of seeking the regulatory authorization needed to bring a commercial juice to market.

"We want to explore a way for consumers to benefit from our discoveries, as we are finding there is a demand for the added health benefits," says JIC's Professor Cathie Martin.

The colour of the tomatoes is derived from high levels of anthocyanins, compounds normally found in blueberries, blackberries and other deeply coloured berries. The purple tomatoes have been shown to have anti-inflammatory effects compared to regular ones and to slow the progression of soft-tissue carcinoma in cancer-prone mice. They also have double the shelf life.

"The most amazing thing is the potential to supply an expensive compound from nature more economically to large markets for food, livestock feed, cosmetics, food colourings and even pharmaceuticals," says Paul Carver, CEO of New Energy Farms where the tomatoes are being grown under glass.



The [tomatoes](#) and juice can be used to study the effects of a high anthocyanin diet on cancer, cardiovascular disease and other chronic diseases. Other varieties, high in compounds such as resveratrol normally found in red wine, are already being used to develop [skin care products](#) in collaboration with Essex company Biodeb.

Bringing the juice to the food market will require regulatory approval and may be possible in as little as two years in North America.

"Our position in Canada is quite strong," says Carver.

"The regulatory process and a vibrant market make a product like this globally competitive."

"In the future, more products like this with high-levels of compounds for human health will become available and on a much larger scale."

The research so far has been funded by the EU and through the John Innes Centre's strategic funding from the Biotechnology and Biological Sciences Research Council. With Professor Jonathan Jones from The Sainsbury Laboratory, Professor Martin has formed the UK's first GM crop spin-out company, Norfolk Plant Sciences, to explore the commercial potential of plants with increased levels of health-giving compounds.

Provided by John Innes Centre

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