Potato ice cream and beyond

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When it comes to culinary versatility, few ingredients can compete with the humble spud. This starchy superstar has outgrown its traditional status of being only a side dish. Nowadays potatoes are celebrated as culinary chameleons that can be transformed into a multitude of dishes that suit every palate and dietary preference.

The highly anticipated project on re-energising waste potatoes, sponsored by the Department of Science and Innovation's Technology Innovation Agency under the *Agriculture Bioeconomy Innovation Partnership Programme* and spearheaded by Potatoes SA and the University of Pretoria, is delivering excellent results and highlighting the diversity of potatoes in the culinary field.

Striving for zero waste

The University of Pretoria's Department of Consumer and Food Sciences embraced not only the versatility of potatoes but also the potential that 'ugly' potatoes have for the processing market and delivered show-stopper dishes. The Food and Agriculture Organization of the United Nations estimates that nearly half of all fruit and vegetables are lost somewhere in the agricultural chain. Ensuring that these products find a valuable secondary industry can contribute to numerous health, environmental and economic outcomes.

The dynamic South African consumer market provides the ideal backdrop for innovative products that meet the needs of a highly diverse population developed from less-than-ideal agricultural commodities. Changing lifestyles along with changing dietary preferences open a new avenue for potato products.

The potato industry is making significant strides towards achieving zero waste and promoting sustainable production practices by ensuring that every potato grown is fully utilised, whether in the primary or secondary industry. The new products developed in this project, using 'ugly' potatoes, shined in dishes such as potato toaster tarts, gluten-free lasagne,

The new products developed using 'ugly' potatoes shined in dishes such as gluten-free lasagne, potato toaster tarts, and potato ice cream.

and potato ice cream. It tickled the taste buds and the imagination.

Three-course value

The project focussed on convenience foods as a way to add value to potatoes that would previously have generated little to no income. Firstly, low-graded potatoes were used in breakfast toaster pies that can be kept in the freezer, reheated, and eaten on the way to work, for instance. Research has shown that consumers need breakfast options that require little to no effort to be prepared, but that are also more nutritious and satiating than the currently available sugar-filled cereal bars.

The toaster pies are made with a ham, cheese, and potato filling which makes it easy on the pallet first thing in the morning. They can be reheated in the toaster, air fryer or oven, making them easily adaptable to the consumers' specific needs.

The second product is a gluten-free beef and potato lasagna. Modern consumers often have less time to assemble, prepare and cook meals from raw materials. Instead, many of them make use of ready-to-heat meals that can be reheated and enjoyed with minimal effort. However, consumers are increasingly aware of the effect of their diet on their health.

Consumers with sensitivities to gluten may have the same time constraints as their peers, but without being able to readily find options that suit their diet. The lasagna sheets used in this product are made from various gluten-free starches and cooked potatoes to create a gluten-free, ready-to-heat product.

The crème de la crème …

Moving on to dessert, low-graded potatoes were utilised in a novel way – in ice cream! Modern consumers are aware that many of the food products available to them contain a variety of stabilisers and preservatives. By adding cooked potato to the ice cream base, the product is stabilised in a completely natural way without sacrificing any of the indulgence of normal ice cream. The ice cream melts much slower than the same ice cream base without potato, which could be useful in hospitality industry contexts such as banquets, where melting ice cream can be a big inconvenience.

Whether you are seeking comfort food, a light snack, or even a gluten-free substitute, the potato can tick all the boxes. The humble tuber is a culinary powerhouse. This highly diverse crop is rich in nutrients and culinary potential and is capable of elevating meals in countless ways. The potato's versatility knows no bounds, proving time and again that it truly offers something for everyone.

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