Unlocking the Goodness of Sugarcane

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Indigenous to Oceania, sugarcane has been used by the Polynesians for more than 5000 years. It was first introduced to the Pacific islands and then reached the banks of the Indus. Persian Emperor Darius' invasion of the Indian sub-continent in 500BC saw him bring back to Persia "the reed which gives honey without bees".

Sugarcane made its way to Western Europe with Alexander the Great's armies in 326BC. Admiral Nearcus described a plant the Persians called a "honey-yielding reed". The Arabs introduced it to the Mediterranean area in the 7th Century, and Crusaders brought it to Europe in the 12th Century with cultivation ranging from Italy and Spain to southern France.

Despite this history, sugarcane no longer exists as a wild species. The species that can be found worldwide are all derived from the Saccharum officinarum species.

Today, sugarcane production yields more than 130 million metric tonnes of sugar globally. Brazil is the largest global sugar producer (20 per cent).[1]

The top 10 producers, which include India, China and Thailand, produce 75 per cent of the total volume. Australia is not on the list of top producers of sugarcane, but it is the second largest raw sugarcane exporter in the world, after Brazil[1].

The local food and beverage industry has a unique opportunity to take advantage of the full spectrum of capabilities of this plant.

Sugar is a cost-effective ingredient that contributes to the sensory characteristics of a product and supplies energy.

It has been show that the addition of polyphenol rich extracts from sugarcane as a food ingredient were able to reduce the insulin response and total glycaemic index of food products.[2]

Products on the market such as CSR's LoGiCane, the world's first Low GI sugar, are examples of how they have had a functional improvement. This is made by creatively using sugarcane as an ingredient. Phytolin, a patented sugarcane extract owned by The Product Makers, can be incorporated as an ingredient to food applications, beyond sugar, to assist in healthy carbohydrate metabolism or provide support for antioxidant defences.[3]

The rich polyphenol content of sugarcane extracts also allows for potential future applications to be explored, for example for its anti-inflammatory properties, improvements in cognition and contribution to sustaining a healthy microbiome.

Other companies such as natural functional foods producer KFSU have taken a different approach by working to include sugarcane fibre, known as Kfibre, as an ingredient to increase the overall fibre content of food products.

These creative uses of the full variety of compounds available in the sugarcane plant should be considered.

References

1. World Health Organisation. (2017) "Incentives and disincentives for reducing sugar in manufactured foods - An exploratory supply chain analysis."
2. Ellis, Timothy P., *et al.* (2016) "Postprandial insulin and glucose levels are reduced in healthy subjects when a standardised breakfast meal is supplemented with a filtered sugarcane molasses concentrate." European journal of nutrition 55.8: 2365-2376.
3. Part of the problem-and perhaps part of the answer?" Australian Sugarcane April-May (2018)

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