



PROJECT SUMMARY

Ref No.: MRIC-RRIGS 21-03	Title: To develop and standardise a Fermented Pitaya Beverage
Local Company: WALALI CO LTD	
Collaborating Institution: University of Mauritius	
Project Leader	
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Name	Organisation
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TECHNICAL ABSTRACT	
<p>There is actually a surplus of pitaya fruit (dragon fruit) on the local market. Covid-19 is for something though. This surplus is due to its high price and it is not fully known by locals. It was mostly consumed by foreigners, well-versed with its virtue. The fruit despite its attractive colour does not appeal much when eaten raw. Nevertheless, fermenting the fruit could bring a totally different story. Walali Co. Ltd. (hereafter cited as Walali) experiments it as a fermented beverage and the result was fabulous. Liu (2014) stressed on the fact that fermentation is a direct viable alternative route for flavour synthesis through microbial processes. Fermentation, either natural or controlled, promotes the bioconversion of appropriate precursor-compounds to unlock aromatic compounds like aldehydes and ketones (Azarnia et. al., 2006; Liu, 2014). Nutraceutical foods and beverages gains more and more importance in the market. Consumers are increasingly looking for food and beverages, which, due to their natural characteristics, bring health benefits, both in the prevention of diseases and in their curative power (Pinto and Vilela, 2021). Rich in phenolic compounds Pitaya is definitely a good candidate. Phenolic compounds owing to its antioxidant abilities play an important role in cancer prevention and having anti-inflammatory and anti-aging properties (Pinto and Vilela, 2021).</p> <p>Pinto and vilela (2021) also emphasised that consumers' decision for a food/beverage is based on attractive colour, texture and sensory attributes. This is a permanent challenge for the food industry. "Being able to make healthy and attractive components in a single food is an even greater challenge". The fermented beverage walali is pondering upon will be up to the challenge. It will be a mild alcoholic drink. The alcohol and carbon dioxide should contribute to safety as well as taste. Beers comes third among beverages mostly</p>	

consumed after water and tea. The company expects to give an alternative to local beers consumers and in so doing reduce imports. Economists now recognize the value of import substitution as a possible method for developing regional economies. The “Buy Local” movement is one key embodiment of import substitution, as increasing purchases within one’s own region reduces leakages within an economic value chain, while simultaneously increasing producer surplus (Miller et. al., 2019).

Thus, Walali is coming forward with the development of a new fermented beverage to be called pitaya beer. Despite the technology is closer to cider (produced from the fermentation of apple) the drink will be called beer similarly to ginger beer. Literature highlighted that all alcoholic beverages was once called beer and this definition was recently revised. Future research might attempt to include non-barley cereal in the beer. Barley is normally produce in temperate countries and for Africa, sorghum is the one being contemplated.

The research will consist to develop an organic farm of pitaya as to master the proper cultural practices. Walali’s strategy is to emphasise a resilient supply chain as it is often the reason for business failure in Rodrigues. Mastering the agricultural technology will facilitate the expansion of pitaya fruit production. A technician will ensure the transfer of technology and a lecturer from University of Mauritius will bring in scientific know-how for more concrete results. The lecturer will also make sure the statistically approach is plausible.

The beverages will follow cider production technology so as to keep track with good manufacturing practices. Nevertheless, the team will add its specific approach learnt from past experiences. Other ingredients obtained locally will be used to add specific flavour to the beverage. Experiments will assess wild yeast in contrast to imported commercial yeast that is wine yeast, baker yeast and cider yeast.

Key Words: Rodrigues, Pitaya or dragon fruit, fermented beverage, nutraceutical