Product Development from Apple, Grapes and Berries Food Waste: Market Research, Industry Analysis and Opportunity Assessment

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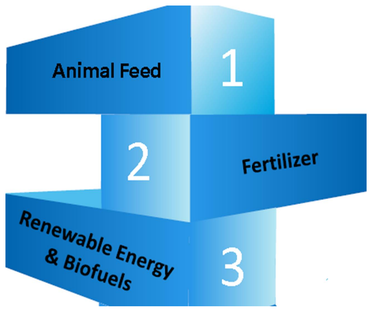
Introduction

The Food and Agriculture Organization, it has been estimated about 820 million people suffer from hunger, undernourishment, and malnutrition, which is estimated to increase by 4.5 % in the world. It has been estimated that 45% of the food wastes are fruits, vegetable roots, and tubers



The current methods of reusing food waste:

- Animal Feed
- Biofuels
- Ethanol Production
- Fertilizer
- anaerobic digestion

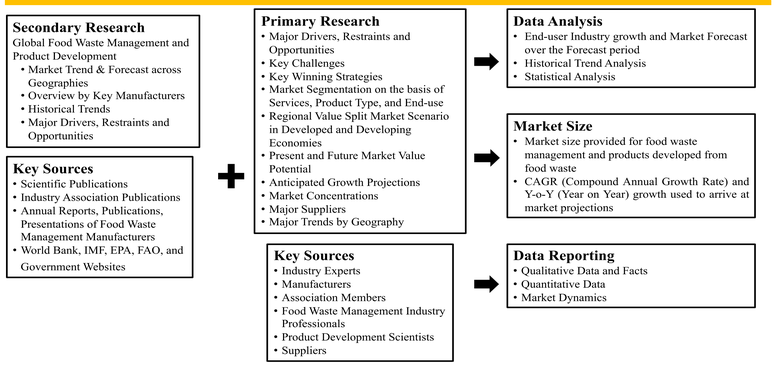
Berry Pomace
Biologically Active Compounds: Cellulose, pectin, phenolic acids, flavonoids and stilbenes
Uses: Anti-oxidant, Source of fiber, functional food products

Apple Pomace
Biologically Active Compounds: Polyphenols : β-carotene/linoleic acid, epicatechin, quercetin glycosides, chlorogenic acid
Uses: Anti-oxidant, Source of fiber, functional food products

Grape Pomace
Biologically Active Compounds: Catechins, Flavonols, and Antho cyanins
Uses: Anti-oxidant, Source of fiber, functional food productsgreat applicability in food, pharmaceutical and cosmetic industries

The objective of the study - to follow a time horizon to 2029, analysis of the of the food wastes specifically to fruit waste and establish an ignored importance of the use of renewable raw materials for functional food product industry.

Methodology



Results

Waste Produced

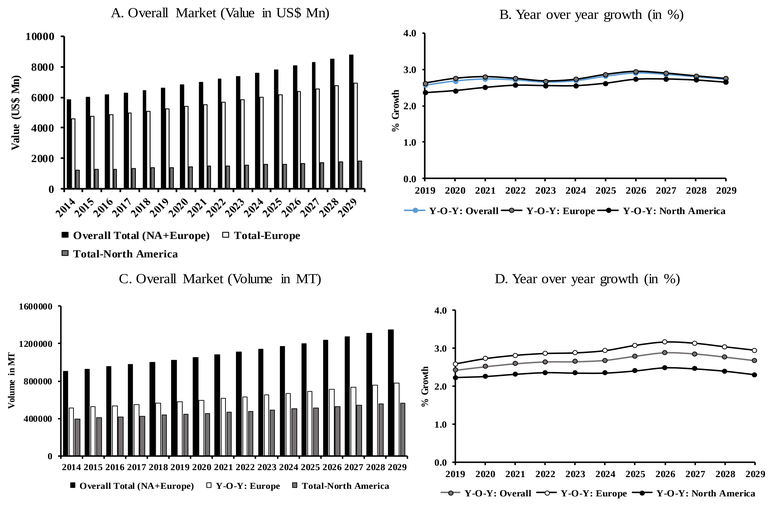


Figure 1. Overall market of products made from apple, grapes and berries as the source of food waste. 1A. Overall market value (US$ Mn) in Europe and North America for products from food waste (2014-2029). 1B. Predicted year over year growth (in %) in Europe and North America (2019-2029) for products from food waste. 2019 is taken as the base year. 1C. Overall market (volume in MT) in Europe and North America for products from food waste (2014-2029). 1D. Predicted year over year growth in volumes (in %) in Europe and North America (2019-2029) for products from food waste. 2019 is taken as the base year.

Apples

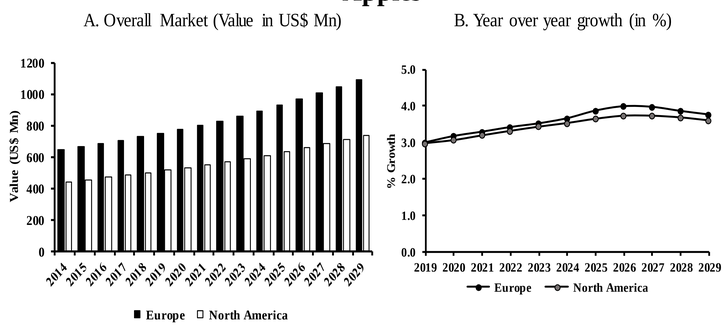


Figure 2. Overall market value (US$ Mn) in Europe and North America (2014-2029) for products from apple food waste as the source. B. Predicted year over year growth (in %) in Europe and North America (2019-2029) for products from apple food waste as the source. 2019 is taken as the base year.

Grapes

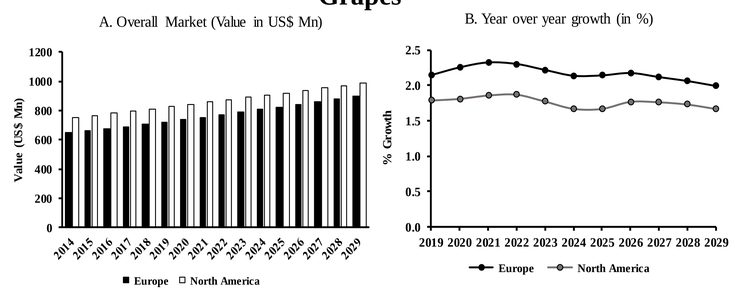


Figure 3A. Overall market value (US$ Mn) in Europe and North America (2014-2029) for products from grape food waste as the source. B. Predicted year over year growth (in %) in Europe and North America (2019-2029) for products from grape food waste as the source. 2019 is taken as the base year.

Berries

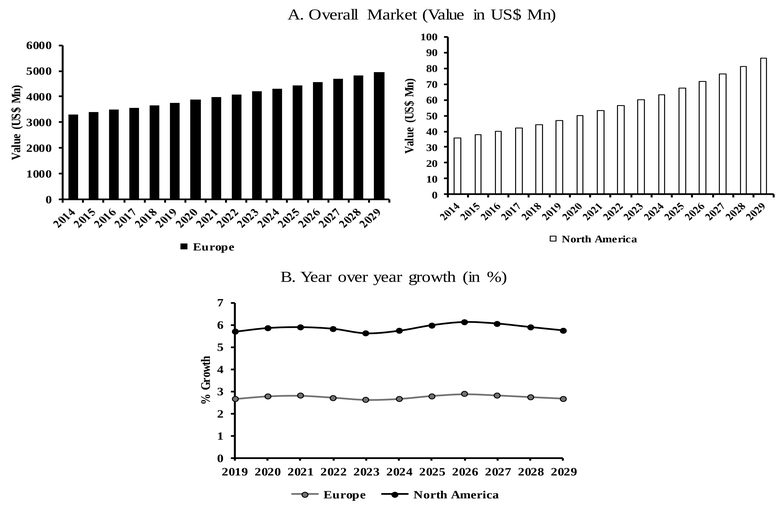


Figure 4A. Overall market value (US$ Mn) in Europe and North America (2014-2029) for products from berry food waste as the source. B. Predicted year over year growth (in %) in Europe and North America (2019-2029) for products from berry food waste as the source. 2019 is taken as the base year

Conclusion

The extraction of BACs from the organic waste will be used in various functional and value added product. The research highlights the scale of food wastage in the North America and Europe to encourage increase recycling and reusability. By studying the waste produced and the composition of the waste, industries can optimize and generate efficient ways of recycling. The increasing food waste can be counteracted with efficient recycling methods and increase the production value of food and the variety in the application of it. The waste management sector will benefit greatly from this research and the industries can increase there profits by focusing on the reusability of the waste.

References and Acknowledgements

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