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

Suhil Ghate, Sonali R. Pandey, Forum R. Madiyar and Siddharth S. Kesharwani
Embry-Riddle Aeronautical University, 1, Aerospace Blvd, Daytona Beach, FL-32114
Augustana University, 2001 S Summit Ave, Sioux Falls, SD 57197
Roseman University of Health Sciences, College of Pharmacy, 10920 S. River Front Parkway, South Jordan, UT 84095

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

Results

Waste Produced

![Graph showing waste produced from apples, grapes, and berries.]

- **Apples**
  - Overall Market (Value in US$ Mn)
  - Year over year growth (%)

- **Grapes**
  - Overall Market (Value in US$ Mn)
  - Year over year growth (%)

- **Berries**
  - Overall market value (US$ Mn) in Europe and North America (2019-2029) for products from berry food waste as the source.

![Graph showing overall market in Europe and North America.]

Figure 1. Overall market of products made from apples, grapes and berries as the source of food waste. A. Overall market value (US$ Mn) in Europe and North America for products from food waste (2014-2029). B. 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. C. Overall market (volume in MT) in Europe and North America for products from food waste (2014-2029). D. 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.

![Graph showing year over year growth.]

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.

![Graph showing year over year growth.]

Figure 3. 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.

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.

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