Processed Fruit and Vegetable Industry in Sri Lanka: Potentials, Barriers, and Prospects

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POLICY BRIEF

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Key Findings

#30 F&V Processors #30 Traders #384 Consumers were surveyed

Processed Fruit and Vegetable (F&V) Industry

- Reduce seasonality of consumption of F&V- Minimize post-harvest losses

Availability of Processed F&V

- **172** local brands
- **110** imported brands
- >90% available in supermarkets

Consumer Preference

70% for locally processed F&Vs
Sauce and **jam** lead the processed F&V

Motives for Processed F&V Consumption

Preference of family members **68%**
Convenience **48%**
Taste **43%**

Potentials of Processed F&V Sector

18% (CAGR per annum) for total output *(2015-2019)*
9% (CAGR per annum) for total export value *(2011-2021)*
93% of sample F&V processors are willing to expand their processing capacity
57% of sample F&V processors send their products to both domestic and export market

Potential Products	Domestic	Export Market
Dehydrated F&V	**48%**	**75%**
Fruit Drinks	**29%**	**33%**

Potential Export Markets

Middle East **50%**
Europe **45%** & America **45%**

Barriers for Processors

Production Related Issues **(CFI 66)**
Problems Related to Government Policies and Regulations **(CFI 59)**
Financial Issues **(CFI 53)**

Perceived Barriers of Consumers

Beliefs of possible health impacts **69%**
Addition of preservatives, artificial colours and flavours **67%**

Background

The fruit and vegetable (F&V) processing sector is one of the core segments of food processing in Sri Lanka. The development of F&V processing is vital to expanding and diversifying the Sri Lankan agricultural sector. Sri Lanka is fortunate to have a plethora of delicious and highly diverse tropical F&V varieties, which makes it possible for Sri Lanka to develop processed F&V products for both local and international markets. Only a limited number of studies have been conducted on the processed F&V industry in Sri Lanka, and no substantial study has investigated the existing value chains in terms of both local and export oriented perspectives, marketing structure, consumer demand, potentials and constraints regarding the processed F&V industry in Sri Lanka. In this context, this study was conducted to analyze the present situation, processing potentials, constraints, marketing system, and consumer demand for the locally processed F&V sector.

Methodology

Primary and secondary data were collected. Purposive sampling was employed in the sample selection of processors and traders, while multistage random sampling was applied in the sample selection of consumers. A pre-tested structured questionnaire was used to interview the selected processors (30) and traders (30) (supermarkets and retailers). In parallel, another questionnaire survey was conducted with consumers (384) in the Colombo, Gampaha, and Kandy districts, which have the highest urban populations. Further, key informant interviews were conducted with relevant officials of key government and private institutions related to the processed F&V industry in Sri Lanka. Moreover, 12 case studies were conducted with the top leading F&V processors in Sri Lanka and with the successful small and medium-scale processors in this sector. Descriptive analysis, compound growth rate analysis, instability analysis, and Constraint-Facing Index (CFI) were employed in the data analysis.

Findings

Fruit and Vegetable (F&V) Processing in Sri Lanka: Potentials & Barriers

Key Strengths of F&V Processors

Most (87%) of the sample F&V processors mentioned that they have a regular customer basis. A similar number of surveyed processors (73%) said that high demand for special products of their firms and regular supply of quality raw materials by suppliers are the key strengths of their firms. About 57 percent of processors noted that skilled and effective labour is the key strength for their company while 43 percent of the processors said quality standards and certificates are the key strength for them. About 30 percent of the processors mentioned that their company have a brand name. Easy access to information regarding markets and usage of new technology are identified as the other key strengths of sample F&V processors.

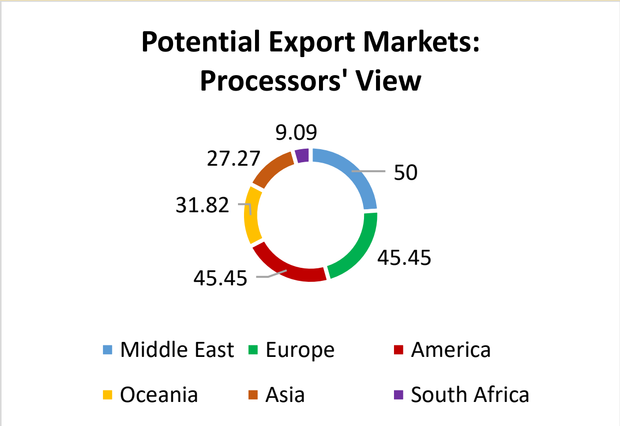
Intention to Expand the Production in Future

The results found that majority (93%) of the surveyed processors are willing to expand their production in product categories with high demand in the local and export markets. For example, most of them wish to expand the production of fruit drinks and herbal drinks (53%) followed by dehydrated F&V products (40%).

Potential Products for Domestic & Export Markets

Dehydrated F&V products (veggie mix, fruit snacks and mix bites) have the high potential in both domestic (48%) and export (75%) markets. Fruit drinks, herbal drinks, F&V powders, chutney, jam, organic products, fruit pulp, jack flour, and sauce are the other potential products for the domestic market. According to the results, fruit drinks, powder, frozen fruit, fruit pulp, organic products, jam, chutney, ready- to- serve curry, healthy/vegan products, slow foods, pickles, sauce, pineapple chunks, and food supplements are the other products which have future export potential.

Potential Markets for Sri Lankan Processed F&V Exports



Source: HARTI Survey, 2023

Barriers for F&V Processors

According to the CFI results, production process related problems (CFI 66) such as high cost of inputs/raw materials (67%), high energy cost (63%), and unavailability of quality raw materials (36%) are the most critical problems faced by the sample F&V processors. Problems related to government policies and regulations with CFI 59, financial problems with CFI 53, Problem related to marketing system with CFI 45, export related problems with CFI 41, and human resource problems with CFI 23 were ranked as 2nd, 3rd, 4th, 5th, and 6th respectively.

Effect of Economic Crisis on F&V Processing Industry in Sri Lanka

About 37 percent of the processors indicated that their sales have increased while a similar proportion of the sample processors mentioned that their sales have decreased over the last two years. A significant proportion (47%) of the sample processors started their business in 2020. Demands of the buyers and export market trends were the major factors that influenced the processors' decision regarding production quantities during the last two years. Strategies to cope with current crisis situations are as follows: juice freezing, material storage, downsizing the staff, cost management, obtaining new orders, reducing package size, providing facilities to workers (transport), online marketing, and collecting raw materials from nearby farmers. During the past two years 40 percent of the surveyed F&V processors approached any government agency to avail of a programme/service to address their business problems or concerns.

Marketing Systems of Processed F&V in Sri Lanka

Varied marketing channel actors such as farmers, collectors, processors, supermarkets, retailers, wholesalers, hotels & restaurants, and exporters (processed F&V) are involved in the processed F&V marketing channel.

Product Availability in the Domestic Market

Imported Products (No.)	**Brands**	**110**
	Product Types	Fruits - **26**
		Vegetables - **27**
	Varieties Used	Fruits - **39**
		Vegetables - **17**
	Importing Regions	**32**
Local Products (No.)	**Brands**	**172**
	Product Types	Fruits - **27**
		Vegetables - **36**
	Varieties Used	Fruits - **47**
		Vegetables -**36**

Source: HARTI Survey, 2023

Current Status of Export Market

The total export earnings of processed F&V products have shown an increasing trend, with the exception of the years 2017 and 2021.

Source: Sri Lanka Export Development Board Statistics, 2023

Major Processed F&V Exports and Destinations (2011-2022)

Pineapple, mango, gherkins, and tomato are the major processed F&V exports due to high export market share during the period effect from 2011 to 2022.

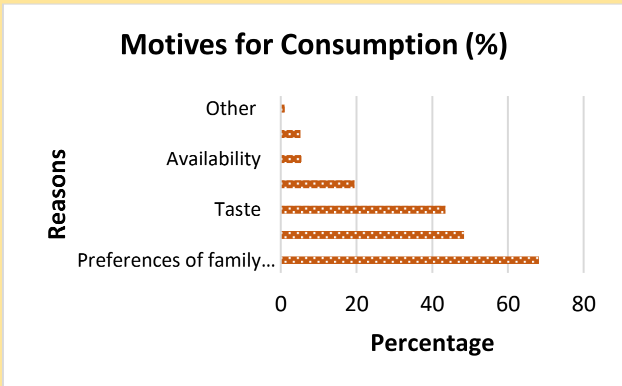
Crop	Major Destinations
Pineapple	Netherlands, Germany, U.S.A, Italy, Switzerland, Australia, Japan
Mango	Canada, USA, Australia, Germany, Italy
Gherkin	Japan, Australia, Taiwan, Netherland, South Africa
Tomato	Maldives, U.A.E, Canada, Australia, U.S.A

Note: Mango: HS 8045040, Pineapple: HS 200820, HS 200949, HS 08043020, Gherkin: HS 20011020, Tomato: HS 210320 were considered due to data availability.

Source: Sri Lanka Customs Statistics, 2023

Consumption of Processed F&V

According to the results, frequently consumed processed F&V products are sauce (59%) and jam (34%). About 70 percent of the households preferred local products while 25 percent of the households preferred both local and imported products. A vast majority of the households (84%) in surveyed districts buy processed F&V from supermarkets while a significant proportion of the population prepared (61%) some of the processed products such as jam, chutney, pickles, and sauce at their households. Preference of family members (68%), convenience (48%), and taste (43%) are the major reasons for household consumption of processed F&V products.



Source: HARTI Survey, 2023

Major factors that prevent households from purchasing certain types of processed F&V products are; 1) Beliefs that not appropriate for non-communicable diseases such as diabetes (69%) and 2) Health risks associated with addition of preservatives, artificial colours and flavours (67%).

Recommendations

- **Commercial cultivation of appropriate F&V cultivars** need to be promoted. Nucleus commercial farmer with an out-grower model is recommended to enhance the F&V supply for the processing industry.

- **Strengthening supply chains and infrastructure** facilities for selected potential F&V products.

- **Establish a close linkage between farmers and processors** to guarantee reasonable prices to farmers and a supply of quality products to domestic market or export destinations.

- **Developing products** with zero or minimum levels of artificial compounds and low sugar content would promote processed F&V consumption.

- **Establish a quality assurance facility,** implement quality control measures, and encourage certifications to maintain the quality of the processed F&V products.

- **The value-addition process should be strengthened,** and processors should be motivated to export processed F&V products since there is an increased demand for value-added F&V products in the world.

- **Niche markets and digital platforms should be established** to market, promote, and make aware of locally processed F&V products.

- **An integrated approach** should be adopted to make linkages among responsible and related institutes to facilitate processors reaching domestic or the export market.

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