

Fiji Domestic Market Study:

Opportunities and challenges for vegetable import substitution

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All  Agricultural Commodities Programme



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List of Abbreviations

ACIAR	Australian Centre for International Agricultural Research
FBS	Food Balance Sheet
MAPI	Ministry of Agriculture and Primary Industries
SPC	Secretariat of the Pacific Community
USP	University of the South Pacific
VAT	Value Added Tax

Executive Summary

Reducing the number of vegetable imports is a policy priority of the Fijian Government. However, replacing these imports with local supply faces a number of challenges. First, vegetable production and supply to the market is dominated by small holders, who are often unable to meet the exacting quality standards, credit demands and services required by the tourist industry, and an increasingly urban market. However, with adequate support, and working in groups and/or through middlemen, producers can better meet these demands.

This paper explores the range of quantitative and qualitative data surrounding vegetable import substitution in Fiji. It identifies the critical factors that need to be addressed by policy makers if domestic producers are going to be able to supply the growing urban and tourist markets.

1. Introduction

The potential of the agricultural sector to increase and strengthen the ties with the tourism sector are often cited. With the sugar industry in decline, the Fiji Government is exploring a dual track policy of encouraging exports of other agricultural products, while facilitating greater import substitution. While exports of fresh produce to our nearby neighbours are complicated by quarantine barriers, relatively high transport costs and competition from lower-cost producers in Asia, markets closer to home may be comparatively easier to access.

With Fiji receiving over 600,000 tourists in 2010, the opportunity presented by this temporary domestic market is worth exploring in greater detail. Similarly, Fiji's increasingly urban population requires local vegetable suppliers to meet the changing needs of urban consumers. While it is often argued that Fijians should increase their consumption of traditional root crops and therefore reduce dependence on imported products like rice, the factors driving changing consumption habits need to be recognized and addressed.

This paper explores the range of quantitative and qualitative data surrounding these two issues. It identifies the critical factors that need to be addressed by policy makers if domestic producers are going to be able to supply the growing urban and tourist markets.

The paper has been prepared within the context of an FAO exercise to demonstrate the value of market data for evidence-based policy

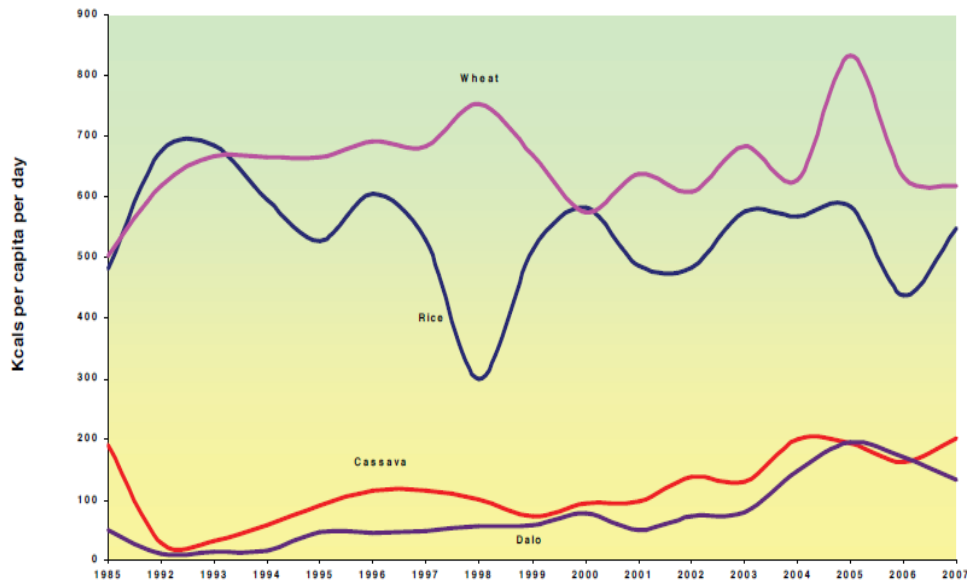
2. Policy issue: Food import dependence

While a major agricultural exporter, Fiji imports a large amount of cereals, rice and vegetables. In 2006 Fiji imported in excess of \$250m of agricultural products. (Loze and Low 2008)

Fiji is committed to reducing its dependence on imported food. The goal of the Ministry of Agriculture and Primary Industries (MAPI) Strategic Development Plan (2007-11) is to address the rise in annual food imports by increasing local food production as substitutes for imported food items. Targets include tomatoes, capsicum, lettuce and rice. The target of this development plan is both domestic consumers and the tourism industry, by creating better linkages between farmers and those currently purchasing imported foods.

The 2007 Food Balance Sheet reports that 62% of the calories consumed by Fijians come from imported food (Food and Nutrition Centre 2010). Locally produced root crops, such as cassava and taro, provide only 11% of Fijians daily calorie intake while largely imported rice and wheat provide 34%. (Figure 1)

Figure 1: Availability of Calories from Major Cereals and Root Crops Contributor, 1985, 1992 – 2007



Source: Fiji Food and Nutrition Centre, Food Balance Sheet 2007, Suva, Fiji

3. Import substitution sector in focus: Tourism

The tourist sector in Fiji has been growing strongly over the last few decades, creating a huge potential domestic market. It is estimated that in 2010, Fiji received over 600,000 tourists staying an average of 9.4 days each. (Fiji Bureau of Statistics) This represents almost 17 million meals consumed, at three meals per day.

The Fiji Visitors Bureau identified 343 hotels, hostels and resorts in Fiji. (Young and Vinning 2007) It is estimated that at present, 80% of fruits and vegetables consumed by the tourism sector are imported. (Young and Vinning 2007) In 2006, the Fiji tourism industry imported FJ\$35 million in vegetables alone. (Loze and Low 2008) This is despite the fact that local vegetables are cheaper than imported ones during the middle winter months of the year.

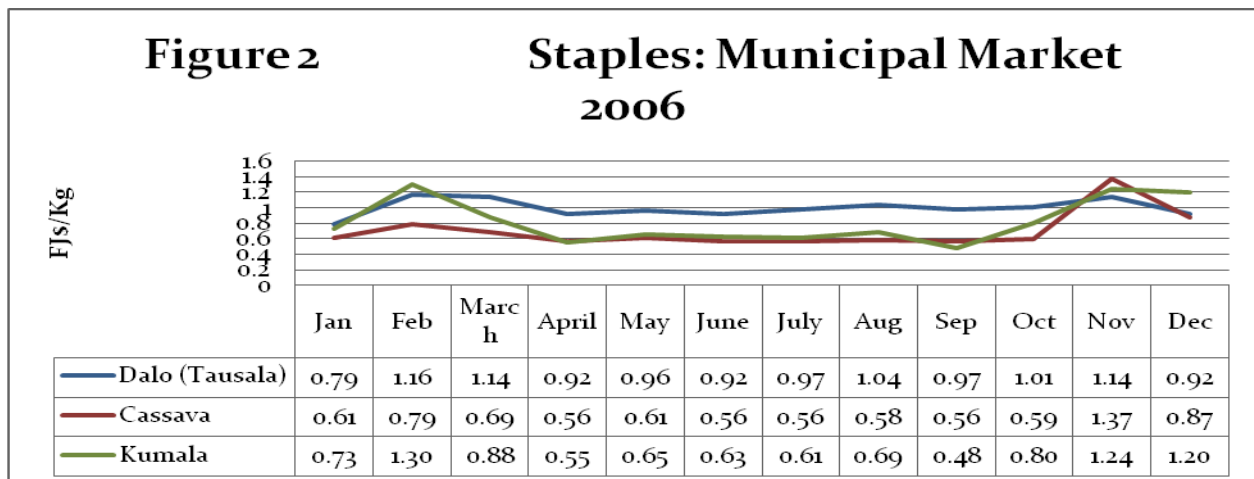
Young and Vinning (2007) surveyed the purchasing decisions of Fiji resorts and hotels sector and found, among other things, an estimated 660 tonnes of tomatoes – the majority of which is imported. If the local producers could secure even half of this demand, they could double the size of the market for locally produced vegetables. Since the high season for tourists – June to November – coincides with the best agronomic conditions for growing vegetables in Fiji, production shouldn't be a problem. The interviews with the tourist sector conducted by Young

and Vinning revealed that 94% of hotels would buy locally, if a supply that met their needs was available. (Young and Vinning 2007) However there were a number of challenges that the authors identified.

First the sizable supplies requested by tourism industry operators indicate that Fiji's horticultural producers could only supply the smaller tourist establishments. To supply the larger establishments, producers need to consider forming some form of a group, the authors determined. (Young and Vinning 2007) However, even when marketing as a group, producers need to be aware that the tourism sector requires heavy servicing. The survey showed that the tourism sector values highly factors such as having supplies directly delivered to their own premises, the need to comply with precise delivery time-schedules, and the fact that deliveries should involve a wide range of different products. One area of particular concern is the fact that around 40 percent of the larger operators demand credit. Thus, to successfully meet the tourism sector's requirements requires the producers or producer groups to have a significant level of organisational and business skills, beyond that revealed by the survey.

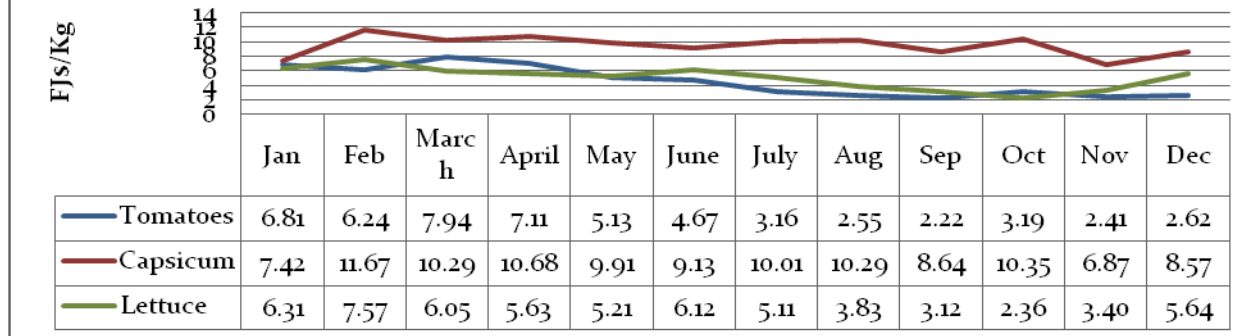
4. Determining demand: beyond the price mechanism

If one looks at domestic market prices compared to imported prices, there is a strong price incentive to buy local vegetable goods over their imported substitutes during the winter months of the year. In the figures below (Figures 2, 3), I explore the fluctuation in price of vegetables and staples over the course of the year; and in Figures 4 and 5 compare the price of local vegetables with imported substitutes. One can see from figures 2 and 3 that there is significant variation in price depending on the month.



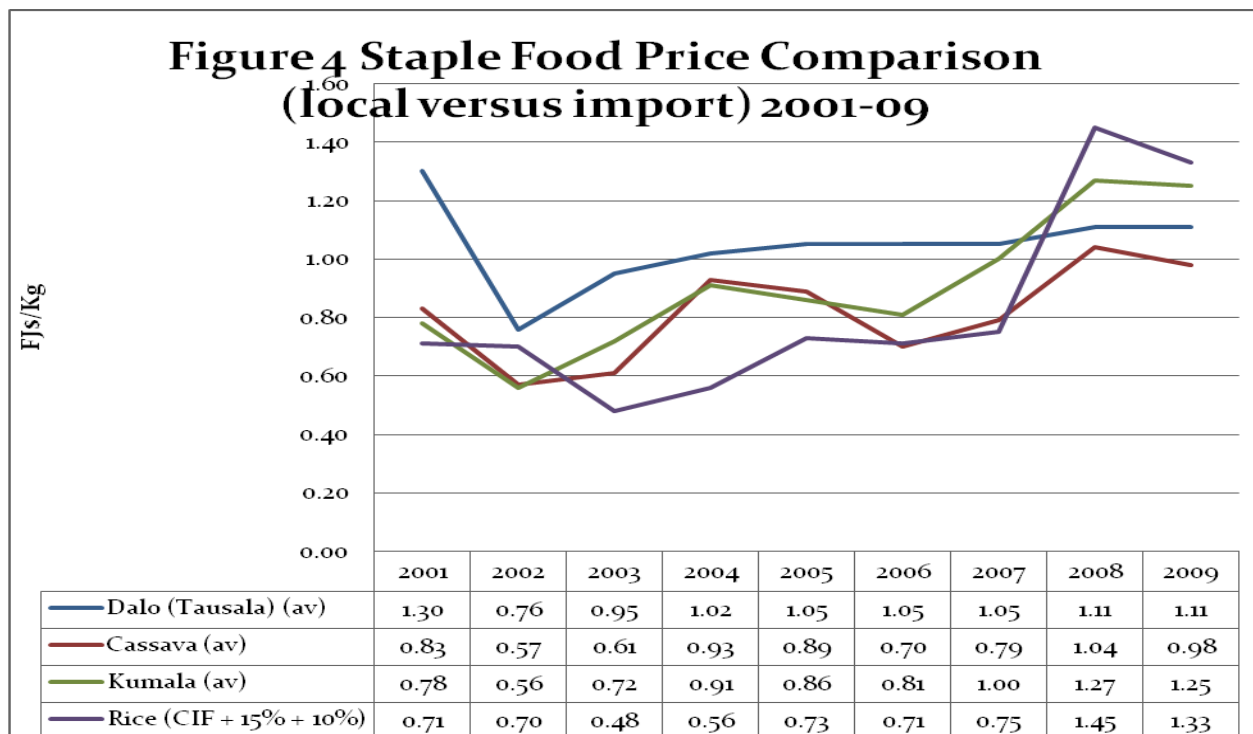
Source: Fiji Ministry of Primary Industries AgTrade Market Weekly database; Secretariat of the Pacific Community Pacific Trade Statistics database (www.pacifictradestatistics.com)

**Figure 3 Vegetables: Municipal Market
2009**



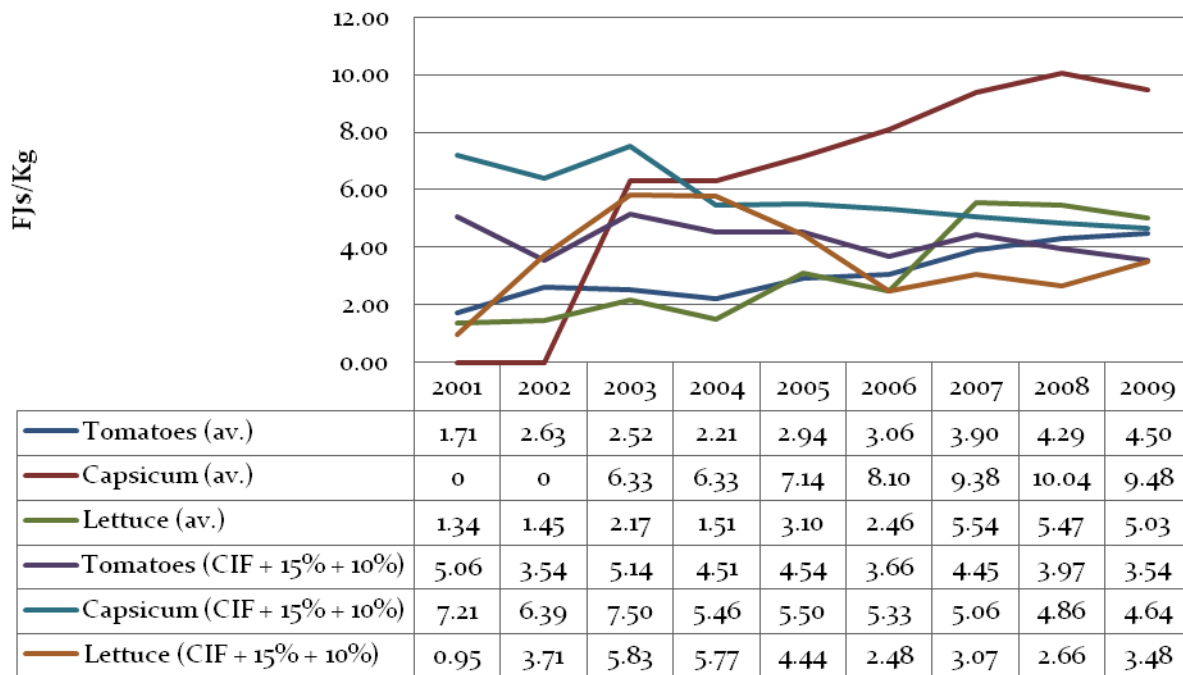
Source: Fiji Ministry of Primary Industries AgTrade Market Weekly database; Secretariat of the Pacific Community Pacific Trade Statistics database (www.pacifictradestatistics.com)

**Figure 4 Staple Food Price Comparison
(local versus import) 2001-09**



Source: Fiji Ministry of Primary Industries AgTrade Market Weekly database; Secretariat of the Pacific Community Pacific Trade Statistics database (www.pacifictradestatistics.com)

**Figure 5 Vegetables Local vs Imports
(wholesale price)**



Source: Fiji Ministry of Primary Industries AgTrade Market Weekly database; Secretariat of the Pacific Community Pacific Trade Statistics database (www.pacifictradestatistics.com)

Figures 4 and 5 indicate imported vegetables are usually more expensive than their local varieties. To determine the approximate wholesale price of vegetables, I have used the import unit price and added a VAT and profit margin. The retail price of these imported products would be perhaps 50 per cent higher again, while the municipal market price for local goods can be taken as both a wholesale and a retail price.

In Figure 4 I have used rice as an alternate or substitute source of carbohydrates to traditional root crops: cassava, dalo and kumala. To determine the wholesale price for rice I have used the same formula – taking the imported unit price and adding a margin for VAT and profit. The retail price for rice would be higher again.

Yet is price so important? The picture painted by qualitative surveys of tourism industry indicates that price is not paramount. Price is only the third most important consideration for the tourism industry, according to Young and Vinning (2007). Quality and service are far more

important, the authors determine. Indeed, 60% of hotel respondents said quality was most important while 55% said delivery was the most important. (Young and Vinning 2007) In addition the reliability of service was important; offering 30 days credit is important; flexibility or purchasing contracts is important. To capture this market opportunity, local farmers – or farmer associations - will have to cater to these needs.

5. Changing consumption habits: urban consumers

A project on the Determinants of Food Choices in Fiji (ACIAR, 2002), reported that changes in Fijian food choice were attributed to value for money and ease of preparation. The findings of the Food Choices study are echoed by the findings of Hone (2004) who further investigated food choices and nutrition in Fiji. He found that Fijians have tended to reduce their consumption of taro in favour of high calorie foods such as rice. Hone (2004) also finds that preparation problems and time were the key reasons given for the declining rates of consumption of traditional foods like taro.

Hone (2004) also found that cassava rice and bread were the most frequently consumed staples for Fijian families, with perceived value and ease of preparation the main reasons given for the frequent consumption of these products. Root crops such as taro, yams and kumala were consumed less frequently because they were perceived to offer poor value for money.

These conclusions have been reflected by the findings of Fiji's Food Balance Sheet. Fiji produces a Food Balance Sheet (FBS) every year, which provides an overview of the total and average daily dietary intake of the Fijian population. The Food Balance Sheet presents the 'calorific' value or food energy of the national diet, and the composition of that diet.

The 2007 Fiji FBS found that per capita, per day, Fijians consume 3411 thousand calories (kcal) – which is about 50% higher than the recommended daily intake. (Fiji FBS 2007) The same report found that in an average year, an average Fijian consumes 56kg of rice; 68 kg of cassava and 56 kg of dalo. However because root crops have a lower calorific value than rice or wheat (e.g. 56 kg of taro or dalo p.a. = 133 kcal per day; 56kg of rice p.a. = 549 kcal per day, or about 4 times the calorific value) it takes a greater quantity of root crops – indeed more than four times the quantity - to provide the consumer with the same food energy as that provided by rice. This calorific value is one measure of 'value for money' for families looking to eat as cheaply as possible.

With the majority of Fijians now living in urban rather than rural areas, a majority of Fijians face additional pressures: less land on which to produce their own crops and the time demands of formal employment, which leads them to make careful decisions over how they spend these scarce resources: time and money.

In December 2010, the University of Adelaide in co-operation with SPC and USP, surveyed 1013 shoppers at the Suva Municipal Market to find out why they shopped there and how their shopping

experience could be improved, given that the municipal market is the largest single retail outlet for local produce. The study found that quality and convenience are most important, but that the limited opening hours, limited available parking and crowded dirty retail space was driving people to use roadside and super-markets. (University of Adelaide, 2011)

6. Conclusion and Recommendations

Price isn't the most important factors cited by the target consumers – tourists and urban consumers using supermarkets. Quality, service, convenience and value for money were cited as factors more important than price. Clearly this leads to the conclusion that, while market price information offers a valuable insight into import substitution opportunities, it needs to be supplemented with the sort of qualitative information presented above as this has enabled us to determine that producing local vegetables at a competitive price isn't alone sufficient to facilitate greater import substitution.

Based upon the analysis of findings in the above referenced studies, some clear recommendations for policy makers looking to reduce the dependence on imported food products can be made:

1. The vegetable supply chain needs to support quality control, delivery and credit services if it is going to be able to supply the tourism industry and supermarkets.
2. Working through farmer associations or other agglomerations that are large enough to be able to supply the volume of vegetables required by the tourism industry and supermarkets is critical. Furthermore, such associations would need to have sufficient cash flow to be able to offer credit to these buyers and also pay their farmers up front.
3. Delivery services are important, and so it is also important to work through 'middlemen' or service providers who are able to offer delivery, on time, and of the right quality and amount.
4. Pre and post-harvest production work needs to be complemented by an appreciation of the specific quality attributes that the tourist market and supermarkets are looking for. Developing clear quality standards and working with farmers to produce to this standard, is essential.
5. Increased production of root crops will not necessarily lead to increased import substitution. Local agribusiness needs to address consumer demands for greater ease of preparation and value for money from local root crops.

6. Programs to encourage consumption of more local foods need to take convenience into account. Therefore consider processing of goods - taro and cassava flour, chips, pre-chopped and frozen, to create additional demand and develop new markets.
7. Another option is to introduce a policy which requires local manufacturers to 'fortify' imported flour with flour made from more nutritious local vegetables or root crops, such as cassava or breadfruit.

Statistics can tell us a lot, but need to be complemented by qualitative information from other 'silos' or program areas , if we are going to get the whole picture – which is what we need to develop effective policy!

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