The marketing channel of two underutilized fruit species of Malaysia: Pulasan \([\textit{Nephelium ramboutan-ake} \text{(Labill.) Leech}]\) and Kuini \((\textit{Mangifera odorata} \text{Griff.})\) by N. Kozai\(^1\), M. Keizer\(^2\), F. dela Cruz \(^2\), P. E. Sajise \(^2\) and S. Idris\(^3\)

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Introduction

Pulasan \([\textit{Nephelium ramboutan-ake} \text{(Labill.) Leech}]\) (Photo 1) and kuini \((\textit{Mangifera odorata} \text{Griff.})\) (Photo 2) are considered underutilized fruit species in Malaysia. Pulasan is a close relative of rambutan \((\textit{N. lappaceum})\), with fruits having short and stubby spines. This species occurs in India (Assam), Burma, Indonesia, Malaysia and the Philippines. Fruits found in Peninsular Malaysia have mostly dark red skin, although there is a rich diversity in skin colour such as yellowish green, yellow, and purplish red. Kuini is a close relative of mango \((\textit{M. indica})\) but with a stronger flavour. Its species name \textit{odorata} means ‘flavourful’. Kuini has never been found in the wild and its exact origin remains unknown. It is commonly cultivated in Peninsular Malaysia, Borneo, Sumatra and Java in Indonesia.

In 2001, the total area planted to pulasan was 846 ha in Peninsular Malaysia, of which 70% was in the southern state of Johor. The total area cultivated for kuini in 1999 was 706 ha, with growing areas mainly found in the states of Pahang, Terengganu, Johor, and Kedah. Pulasan is grown both in small-scale and commercial farms whereas kuini is mostly cultivated in home gardens. An understanding of the marketing channel is necessary in order to explore market opportunities and to promote cultivation of the two fruit species to farmers.

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Trading of pulasan fruits is done by middlemen and farmers. In Johor, the private traders and Federal Agricultural Marketing Authority (FAMA), a government agency under the Ministry of Agriculture and Agro-based Industry, act as middlemen in the marketing chain of pulasan. FAMA buys the fruits directly from the farmers and supplies fruits to wholesale markets in Johor Bahru and Kuala Lumpur. Private traders supply fruits to supermarkets, small retailers and mobile markets. Some farmers sell their fruits directly to consumers at farmers’ markets called Pasar Tani and Jualan Terus, which are also supported by FAMA and the Department of Agriculture (DOA) in Johor. The marketing channel for pulasan is shown in Figure 1.

Pulasan from Johor exported to Singapore enjoy higher market prices even though an additional 5% import tax is levied. Another advantage is that no quarantine restrictions are imposed on pulasan exports to Singapore since the latter is regarded as a local market. Pulasan production is quite low in Selangor, and fruits are brought in from Johor to meet the local demand.

Prices of pulasan range from RM 2.00 – RM 3.50/kg (1 US$ = RM 3.77) at the farm gate, and RM 3.20 – RM 4.00/kg at the small retail level in Johor. In Selangor, prices range from RM 1.50 at the farm gate to RM 2.00 – RM 5.50 at the small retail level.

a) Producer

Pulasan cultivation started only in the last eight years, hence commercial production is relatively new. Commercial producers sell the fruits either to FAMA or to private traders, or sell directly to the market. When selling directly to the market, large-scale farmers bring the fruits to wholesale markets or to Singapore using their own trucks. Small farmers however, form groups to jointly market their produce in open mobile markets such as Jualan Terus. Cultivation of pulasan in the home garden is mainly for home consumption.
b) Middlemen

FAMA as a middleman can offer good prices for pulasan in large quantities, as they can sell the products at their own booth in the wholesale market. The private traders sell the fruit directly to retailers after buying the fruits from farmers. Depending on the agreement with farmers, traders usually harvest the fruits while farmers are responsible for managing the orchards. Traders also provide market information to farmers. The profit is shared between traders and farmers. Some private traders have their own shops, and sell their fruits to consumers or other traders. Pulasan is graded and priced according to fruit size. Big or ‘Grade A’ fruits (10 – 12 fruits per kg) can be traded at RM 0.50 higher than smaller ‘Grade B’ fruits (more than 13 fruits per kg).

c) Retailers

Larger quantities of pulasan are sold in small retail outlets and mobile markets compared to supermarkets (Photo 3). The selling price is RM 0.50/kg higher than for rambutan, and trade of pulasan is limited by the seasonal production.

![Photo 3: Pulasan (front) sold with other fruits including rambutan at Selangor market.](image)


d) Consumers

Pulasan is a popular fruit among consumers because of its sweet taste and easy seed-removal. Demand of fresh pulasan is quite high, and currently, the supply of pulasan does not satisfy the demand in the fresh market; there is no demand for processed products.

Marketing channel - kuini

Kuini is mostly grown in backyards for home consumption, although there are a few commercial farmers in the state of Johor. Here, fruits are collected by private traders and sold to various markets in other states (Figure 2). Some fruits are also exported to Singapore. FAMA is not involved in the marketing of kuini as there are only a few producers. There are no commercial kuini farms in Selangor – kuini produced is mainly for home consumption.

The price of kuini ranges from RM 1.50 – 3.00/kg at the farm gate, and are retailed at RM 4.00/kg by small retailers in Johor. In Selangor, the retail price ranges from RM 3.00 to RM 5.00 per kg. The price at the Jualan Terus market is RM 1.00/kg. Kuini fruits are not graded.
**Figure 2**: Marketing channel of kuini in Johor and Selangor.

**a) Producers**
Most of the kuini trees are more than 20 years old. As the trees were propagated by seed, the quality of fruits vary from tree to tree. In addition, growers find it difficult to manage the big trees, resulting in poor fruit set and infestation by insects (fruit fly) and diseases. In addition, since the kuini is used mostly for home consumption, there is no or little expenditure on farm inputs.

**b) Middlemen**
The buying and selling of kuini is done by private traders. Traders buy the fruits left on the higher branches of the trees, and harvest them using ladders or long poles with bags attached to them. FAMA is not involved in kuini trading at all.

**c) Retailers**
Kuini is not sold in supermarkets, but only at small retail outlets and local markets. Some small retailers consider the kuini as having low commercial value because the fruits are infested by the fruit fly, whereas others prefer kuini as it is a rare fruit, which can be sold a higher price compared to other major fruits including mango.

**d) Consumers**
Many consumers are still not familiar with the kuini. While some consumers prefer its sweet taste, others do not like its strong flavour.
Photo 4: Fruits of kuini sold together with other fruits and vegetables at Selangor market.

Market potential of pulasan and kuini

There is a good demand for pulasan in the local market. Due to its rather short shelf life of only three days, export opportunities are limited. However, since the local market is still undersupplied, the opportunity exists for farmers to expand pulasan cultivation. A more in-depth economic analysis of pulasan production including marketing strategies is necessary before concrete recommendations can be made.

On the other hand, kuini has limited production and is not a popular fruit. Although the fruit is sweet, some consumers do not like its strong flavour. Efforts should be made to promote the good taste of kuini to increase its demand. In addition, the potential of processing kuini into various products such as jams and pickles should be investigated further. Currently kuini is being propagated by seed hence there is a great variation among trees and their production, and fruit quality. This has a significantly negative effect on the propagation and marketing of kuini. Research is needed to evaluate existing trees, and identify, select and multiply outstanding kuini varieties. It is anticipated that this will lead to an increased interest by producers to grow kuini; with better varieties available in the market, consumers’ interest in this fruit may also increase.

References


