

MARDI's use of 4P marketing mix strategy for rare fruits planting material

(Penggunaan strategi bauran pemasaran 4P oleh MARDI bagi bahan tanaman buah-buahan nadir)

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Abstract

Planting materials of rare fruits have a unique market which is also known as a niche market. The lack of consumer comprehension about the nutritional value of rare fruits is one of the factors contributing to low consumer demand. Promotion is a very important activity to ensure a developed product reaches its target audience. Therefore, MARDI through the Gene Bank and Seed Centre have used several promotional methods to increase consumer awareness and thus increasing demand for rare fruit planting materials. This study is conducted to survey marketing strategies based on the 4Ps strategy, namely, Product, Price, Place and Promotion. MARDI's planting materials effectively practiced the 4P marketing mix strategy. The sale of rare fruit plants from 2012 to 2016 increased twice its base value generated from sales in events and sales at MARDI's Gene Bank and Seed Centre. Promotion is done through major agriculture exhibitions including *Hari Peladang, Penternak dan Nelayan Kebangsaan*, Malaysian Agriculture, Horticulture and Agrotourism Show (MAHA) and state carnivals. However, the marketing strategies need to be improved to satisfy the needs of consumers and to compete with other nurseries.

Introduction

One of the main elements in business is marketing. With the advancement of technology such as the internet, marketing can be done worldwide without boundaries. Marketing plays an important role in establishing relationships between consumers and the organisation's offerings to the market. Consumers are the most important entity which ensures the survival of a business. Therefore, a business entity must ensure that they produce the best products while using all tools available to market their products to the consumers. An effective approach to consumers will create attraction and indirectly enable a business

to be more competitive in the global market today.

Marketing field is a dominant field in the business process. It is an activity done by a company to promote the buying or selling of a product or service. Marketing aims to attract new consumers by promising the value of good products and services while maintaining long-term consumers with quality assurance for consumers' satisfaction (Kotler and Armstrong 2000).

Current businesses are now using the internet to market products via the use of websites, social media and e-commerce sites. This approach enables business organisations to conduct interactive and

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effective marketing on their website.

A business organisation will be able to understand the needs of consumers based on the purchase process that has been made, the frequency of consumers browsing the website, the consumers feedback and the attractiveness of the product or service. The business organisation will then interpret and respond to the information received by providing services capable of attracting consumers' attention. This approach will indirectly increase consumers' loyalty and increase sales (Haeckel 1999).

Marketing and promotions are important activities in ensuring the product reaches target consumers. Therefore, a robust marketing and promotional networking system needs to be developed. This is especially important for new products resulting from MARDI's research and development. The ease of doing marketing and promotion activities is closely related to the percentage of consumers' acceptance of the product. Marketing is a business activity system designed to plan and implement conception, pricing, promotion and distribution of products that meets the needs of consumers and at the same time achieving organisational objectives. Promotional activities advertise the benefits of the product and attract the target consumers. Promotion is a component in a marketing mix that emphasises effective techniques for selling products.

Malaysia is rich in diversity of plant genetic resources that are mostly native and endemic. Among the original plants in Malaysia are rare fruits that can be eaten but not widely known (Anon. 2004). Generally, there are about 500 species of plants with edible fruits found in the country. From that total, 100 species of rare fruits have been widely cultivated and 17 species have been commercially successful, either for consumption or for processing. Commercial fruits with economic value and export potential are usually planted in large fields, whereas, rare fruits are planted around the house or orchards, and most of

the wild species can still be found in their original habitat. These rare fruit species are becoming more difficult to find because of deforestation. Generally, rare fruits such as ceri Terengganu, rambai, rokam and bidara have a high value. In addition to providing local communities with economic benefits, these fruits are also an important source of food and nutrition. More importantly, the diversity of these fruit species and wild species contribute to the sustainability of the ecosystem.

According to Raziah et al. (2008), there are about ten varieties of these rare fruits that are rarely used to plant which can generate high income for growers. The increase in demand for these rare fruits may also be due to the latest scientific discoveries on nutrients and health benefits of rare fruits. Promotion of rare fruits by MARDI's Gene Bank and Seed Centre especially during big events such as Malaysian Agriculture, Horticulture and Agrotourism Show (MAHA) also helps in increasing consumers' knowledge and interest.

This study was conducted to determine the impact of marketing strategies based on the 4Ps marketing mix, namely, Product, Price, Place and Promotion of rare fruit planting materials by MARDI's Genebank and Seed Centre. This study focuses on the 4Ps, namely, Product, Price, Promotion and Place for the market.

Methodology

Qualitative research method is used to describe MARDI's Gene Bank and Seed Centre marketing strategy which includes interviews and personal communications with respondents to acquire information on the effectiveness of the strategies. The interviews are conducted without structure and face to face with respondents. A survey on three private nurseries was conducted to identify the price of rare fruit seedlings sold in the market. The nurseries chosen were near to MARDI's planting materials sales centre area to reduce the chance of price differences due to different localities.

Sales record of rare fruit seedlings for 5 years (2012 – 2016) were analysed to evaluate the impact of marketing strategy done by the planting material sales centre in MARDI. The effectiveness of the 4Ps marketing mix strategy can be concluded and be used as a guide for future planning of rare fruit seedling production and sales.

Visits were conducted to six MARDI's planting material sales centres including MARDI Serdang Headquarters, MARDI Klang, Selangor, MARDI Kuala Kangsar, Perak, MARDI Sintok, Kedah, MARDI Jerangau, Terengganu and MARDI Pontian, Johor to observe management methods used in each location. Through these methods, the researcher observed sales and promotion activities and its effects on the sales of rare fruit seedlings.

Results and discussion

The marketing strategy of MARDI's rare plant materials sales centre is based on the concept of the 4Ps marketing strategy which is Product, Price, Place and Promotion.

Product

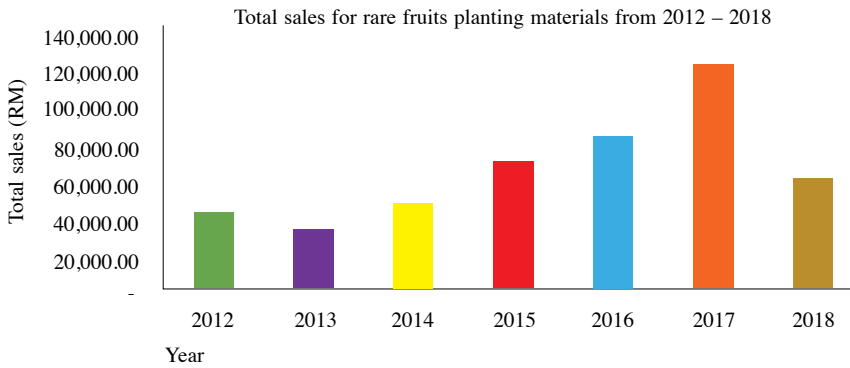
The product element is one that can be offered in the marketplace to attract consumers' attention to meet their needs and wants of consumers. It includes visible features, has its own brand, specific image, purchase support, qualitative and packaging. Service is also considered as product which is an activity given by a non-physical but can satisfy the needs and wants of the users. In general, MARDI's rare plant products are *asam gelugur*, *durian belanda*, *petai*, *limau kasturi*, *limau nipis*, *limau purut*, *jambu bertih*, *jambu bol*, *kedondong*, *kuini*, *cermai*, *belimbing buluh*, *nam-nam* and *nona*. Future potential rare plants for sale also includes *bacang*, *binjai*, *kundang*, *mentega*, *jentik-jentik*, *tampoi*, *melati*, *asam kandis*, *sentul*, *kulor*, *tempunik*, *cermai belanda*, *jambu bol*, *jambu mawar*, *mata kucing*, *ridan*, *kameto* and *ceri Terengganu*. Each of these products have special features that attracts consumers.

The sales volume of rare fruits planting materials during the 6 years of sales showed an increasing trend. *Figure 1* shows the increase in the sales from year to year after promotions and advertising activities were introduced. Interviews with customers who purchased rare fruits planting materials from MARDI indicated that most of them knew about the sales through MARDI's Facebook postings. The sale of rare fruits plants from 2012 to 2016 doubled with sales values of RM40,342.00 and RM81,391.00 (*Table 1*). The highest total sale of rare fruits in 2017 was RM119,954.00. Promotion activities created awareness of consumers about the benefits of rare fruits which also contributed to the increase in sales of rare fruits plants. Most consumers plant rare fruits in orchards and within their home gardens (Norlidawati and Nik 2016).

Promotion

Promotion incorporates all the tools necessary in the marketing mix which is used to persuade consumers to purchase a product (Kotler et al. 2005). There are people who assume that quality products will be sold on their own. However, promotional strategy requires sellers to carry out the activities of introducing the products to be offered to consumers.

The planting material sales centre also follows the flow of modern marketing strategies in marketing rare fruits products including plants through MARDI's Facebook page and brochures. Documentation of product features produced with advertising for promotional purposes is essential to expose the consumers to the products of rare fruits planting materials sold. Consumers interviewed suggested that printed promotional materials should use the latest graphics and designs to attract consumers to MARDI's booth in events and sales centres. According to some respondents, promotional materials give the first impression in the decision of visiting sales centres. With more promotional materials, whether printed or online using the latest graphic designs



Source: Field survey (2018)

Figure 1. Total sales for rare fruits planting materials from 2012 to 2018

Table 1. Sales values from 2012 to 2018 for the sale of rare fruits plants

Year	Total (RM)
2012	40,342.00
2013	32,178.00
2014	45,790.00
2015	68,009.00
2016	81,391.00
2017	119,954.00
2018	59,318.00

and useful information, more consumers will be informed about the product. The relevant brochures are circulated to prospective potential consumers, government departments and agencies as well as private sectors related to the agricultural sector at MARDI's planting materials sales sites as well as exhibitions such as MAHA, *Hari Peladang, Penternak dan Nelayan Kebangsaan* (HPPNK), MARDI Open Day at each station, Mini MAHA, Agrofest and various state and national programmes. Free publication materials are provided to course participants, official visitors to MARDI and schools who visit MARDI's sales centres.

MARDI's planting materials sales centres are yet to promote its products through mass media. Mass media promotion requires high cost but is considered to be one of the most effective ways to promote products.

Price

Pricing is the amount of money charged on a product or service for users using a product or service. It is also a business pricing policy that shows the selling price of a product or service. This pricing model plays an important role in determining the purchasing power of consumers. The general perception is that the price symbolises the quality of the planting materials. But in the reality of marketing, the fact is not necessarily true to be the basis for setting a strategic price.

The prices of MARDI's rare fruits planting materials are affordable and cheaper than private nurseries. The sale price of MARDI's rare fruits is mostly between RM10.00 and below. This is shown in *Table 2*. As a research institution, the goal of the planting materials sales centres is to disseminate information on technology and research results that have been carried out. In line with these goals, MARDI's marketing materials strategy is to place competitively priced but affordable purchases.

Place (Location)

Location or distribution channel is the link between products and consumers. Market place is an existing place be it physical or online that allows buyers to interact to purchase products or seek information regarding products and services. A suitable

Table 2. Price difference of rare fruits seedlings of MARDI compared to private nurseries

Type of plants	Price (RM)			
	MARDI	Private nursery A	Private nursery B	Private nursery C
<i>Durian belanda</i>	10.00	20.00	18.00	25.00
<i>Petai</i>	8.00	15.00	10.00	20.00
<i>Asam gelugur</i>	8.00	18.00	10.00	15.00
<i>Limau kasturi</i>	8.00	10.00	10.00	15.00
<i>Limau nipis</i>	8.00	10.00	10.00	10.00
<i>Limau purut</i>	8.00	10.00	10.00	10.00
<i>Jambu bertih</i>	8.00	15.00	18.00	12.00
<i>Jambu bol</i>	8.00	14.00	15.00	10.00
<i>Kedondong</i>	10.00	18.00	20.00	15.00
<i>Kuini</i>	10.00	20.00	20.00	15.00
<i>Cermai</i>	10.00	16.00	12.00	15.00
<i>Belimbing buluh</i>	10.00	15.00	18.00	15.00
<i>Nam-nam</i>	8.00	18.00	14.00	12.00
<i>Nona</i>	5.00	18.00	18.00	15.00

location to sell products determines how users can get their desired products quickly, easily and at low cost. The strategy to choose sales location emphasises on the aspects of product distribution channels that serve or deliver products to target consumers. Offering the right products, at the right place/location and at the right time is vital to marketing strategy.

MARDI's planting materials distribution strategy is implemented through two methods, namely, static methods at six selected sales centres in MARDI and the second method is through outside sales at strategic market locations. For the first method, the raw materials are sold in sales centres at six MARDI stations, namely, at BBshoppe (MARDI Serdang), MARDI Kuala Kangsar, MARDI Sintok, MARDI Jerangau and MARDI Pontian. The main sales centre at MARDI Headquarters is called BBshoppe in Serdang, Selangor. BBshoppe's main target is buyers of plant materials for large gardens and orchards, buyers who are just buying for hobbies and planting around the houses, MARDI's visitors and MARDI's staff. Since 2015, BBshoppe has started its sales operations in new buildings that are more attractive to

consumers to come and buy the planting materials (*Plate 1*).

The second method of sales is carried out by participating in exhibitions and expos such as MAHA (*Plate 2*), *Hari Peladang, Penternak dan Nelayan Kebangsaan* for state and national levels, MARDI Technology Day, MARDI Open Day at each station, Mini MAHA, Agrofest and various state-level programmes nationally. Involvement in exhibition programmes outside the station as well as in selected states is a platform where visitors can identify and purchase rare fruit planting materials and learn about the existence of rare plant materials as well as existing fruit ingredients (*Plate 3*).

Research officers involved with rare fruits also contribute in the promotion of rare fruits planting materials via exhibitions and visits conducted at MARDI, especially at the MyGeneBank™ building. MARDI's MyGeneBank™ is where conservation of rare fruits species is done via in situ and ex-situ conservation. Visitors can see for themselves the live rare fruit plants and also the herbarium lab (*Plate 4*).



Plate 1. Front view of BBSHOPPE located at MARDI Headquarters, Serdang, Selangor



Plate 2. Consumers visiting MARDI's planting materials sales booth

Conclusion

This study showed that the sale of rare fruit planting materials produced by MARDI fully adopted the 4Ps marketing mix strategy. Using the marketing mix strategy which is Product, Place, Promotion and Price, helped increase awareness and improved sales of rare fruit planting materials. Having a very competitive price for the products also helped achieve the sales target for rare fruits planting materials. MARDI uses a rolling fund as a capital to produce seedlings including those that are from rare fruits. Since the market for rare fruits is limited, a reform and more in-depth study is required so that rare fruits seedlings have more market demand among consumers. Promotion activities gives positive impact on sales of rare fruits planting materials with an increase in sales volume of RM119,954.00 in 2017. However, the marketing strategies need to be improved to satisfy the needs of consumers and to compete with other nurseries.



Plate 3. Visitors choosing planting materials before purchasing at MARDI's booth



Plate 4. Visits organised to MyGeneBank™ to promote rare fruits

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Abstrak

Bahan tanaman buah-buahan nadir mempunyai pasaran yang unik atau dikenali sebagai pasaran ceruk (*niche*). Kekurangan pemahaman pengguna tentang nilai khasiat buah-buahan nadir adalah salah satu faktor yang menyumbang kepada permintaan pengguna yang rendah. Promosi adalah aktiviti yang sangat penting untuk memastikan produk yang dibangunkan sampai kepada pengguna sasaran. Oleh itu, MARDI melalui Pusat Bank Gen dan Biji Benih telah menggunakan beberapa kaedah promosi untuk meningkatkan kesedaran pengguna sekali gus meningkatkan permintaan untuk bahan tanaman buah-buahan nadir. Kajian ini dijalankan untuk meninjau strategi pemasaran berdasarkan strategi bauran pemasaran 4P iaitu, Produk, Harga, Tempat dan Promosi. Bahan tanaman MARDI telah mengamalkan strategi bauran pemasaran 4P dengan berkesan. Nilai jualan anak pokok buah-buahan nadir dari tahun 2012 hingga 2016 telah meningkat dua kali ganda dari nilai asasnya yang dijana daripada jualan dalam acara dan jualan di Pusat Bank Gen dan Biji Benih MARDI. Promosi dilaksanakan di pameran pertanian utama termasuk Hari Peladang, Penternak dan Nelayan Kebangsaan, *Malaysian Agriculture, Horticulture and Agrotourism Show* (MAHA) dan karnival pertanian peringkat negeri. Walau bagaimanapun, strategi pemasaran yang dilaksanakan oleh MARDI perlu ditingkatkan untuk memenuhi keperluan pengguna dan bersaing dengan tapak samaian yang lain.