

## **MARKETS FOR NON-TIMBER FOREST PRODUCTS IN THE VICINITY OF PASOH FOREST RESERVE, MALAYSIA: PRELIMINARY SURVEY RESULTS**

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**LIM, H.F., VINCENT, J. & WOON, W.C. 1994. Markets for non-timber forest products in the vicinity of Pasoh Forest Reserve, Malaysia: preliminary survey results.** A preliminary survey of markets around Pasoh Forest Reserve was conducted to collect data on sales of non-timber forest products (NTFP). Eight types of markets were identified in 40 rural and 2 urban communities. At the time of the study (October - December 1991) NTFP were sold in all markets, except permanent shops. However, only nine types of NTFP were sold. Urban markets offered a slightly greater variety of NTFP and sellers in urban markets grossed nearly three times as much revenue per date as did sellers in rural markets. Even in urban markets, however, sellers' incomes were below the national average.

Key words: Non-timber forest products - rural- urban- markets - forest

**LIM, H.F., VINCENT, J. & WOON, W.C. 1994. Pasaran untuk bahan bukan kayu di kawasan Hutan Simpan Pasoh, Malaysia: keputusan awal kajiselidik.** Satu kajian awal yang bertujuan untuk mengumpul data mengenai penjualan hasil hutan bukan kayu telah dijalankan di pelbagai jenis pasar di sekitar Hutan Simpan Pasoh. Sebanyak lapan jenis pasar telah dikenalpasti di 40 komuniti luar bandar dan 2 komuniti bandar. Semasa jangka waktu kajian (bulan Oktober-Disember 1991), didapati bahawa hasil hutan bukan kayu dijual di semua jenis pasar, kecuali di kedai runcit. Sunggupun demikian, cuma sembilan jenis hasil hutan bukan kayu diurusniagakan. Di bandar pula, didapati lebih banyak jenis hasil hutan bukan kayu dijual di pasar dan para penjualnya memperolehi pendapatan kasar harian sebanyak tiga kali ganda berbanding dengan penjual di luar bandar. Walau bagaimanapun pendapatan penjual di bandar kurang dari pendapatan purata negara.

## Introduction

Although non-timber forest products (NTFP) have traditionally been important in meeting rural food and material needs, their economic value has generally been neglected, if not ignored (Panayotou & Ashton 1992). In recent years, several studies have suggested that the so-called 'minor' forest products may be worth as much, or more, than other uses of the forest (Caldecott 1988, Peters *et al.* 1989). Recognition of the economic value of NTFP has prompted rural people to domesticate certain types (Lim 1991).

The economic value of NTFP should be recognized, but neither understated nor overstated, when forestry policies are made. Their long-run value will depend very much on the factors that affect demand for them, and how economic development affects these factors. For example, if the sales of NTFP in local markets are highly sensitive to price, then programmes to promote forest management for NTFP could result in sharp price declines, which would reduce the economic viability of the programmes. If NTFP are what economists term "inferior" goods, their consumption will fall during development as income levels rise.

We have initiated a study of these issues in local markets around Pasoh Forest Reserve in Negeri Sembilan, Malaysia. Malaysia's rapid economic growth in recent decades makes the Pasoh area an interesting location for studying the impacts of development on consumption and value of NTFP. Communities around Pasoh comprise Orang Asli (aborigine) villages, Malay villages, and Chinese villages and towns that retain many of their traditional characteristics; land development schemes based on plantation tree crops (rubber and oil palm); and economically and ethnically diversified cities linked to the modern industrial economy.

This paper presents data from preliminary surveys of sales of NTFP in local markets in late 1991. In view of the shortage of quantitative economic information on NTFP, we felt that these data would still be of interest to other researchers, even though they are from preliminary surveys.

## Study approach

We began by determining what types of markets exist in communities around Pasoh and what types of NTFP are sold in them. There are two urban communities (population > 10,000) and 40 rural communities within 40 km of Pasoh.

Through several field visits, we identified 8 types of markets in these 42 communities. One, the weekly farmers' market, is organized by the Federal Agricultural Marketing Authority (FAMA). The rest are organized by a local governmental unit, the District Council, which licenses the sellers. The remaining markets are permanent shops, daily markets (which are held seven days a week), night markets (which are held weekly), weekly markets (which are held during day time), and three types of hawkers (individual sellers): itinerant, who have regular routes and sell from cars, vans, motorcycles; static, who sell from stalls in fixed locations; and temporary, who vary the location of their stalls. Transactions in all these markets are made on a cash, not barter, basis.

Table 1 shows that all communities had at least one type of market. The two urban communities (Bahau and Kuala Pilah) and six of the larger rural communities had six or more types of markets. More than half had shops (34) or hawkers (itinerant, 41; static, 30; temporary, 22). Hawkers' markets were the only type in seven of the eight communities that lacked shops. Of course, this does not imply that households in these communities had no other option than to buy from hawkers. Peninsular Malaysia has a well-developed road system, and even in rural areas many households own some type of vehicle. This enables households to shop at markets in surrounding communities as well as in their own.

**Table 1.** Markets and availability of NTFP in communities around Pasoh Forest Reserve

Type of market*	Types of communities**		
	Urban	Rural	All
Shop	2 (2)	32 (3)	34 (5)
Daily	2 (2)	9 (7)	11 (9)
Night	0 (0)	2 (2)	2 (2)
Weekly	2 (2)	7 (7)	9 (9)
Farmers'	1 (1)	4 (3)	5 (4)
Hawkers:			
Itinerant	2 (2)	39 (38)	41 (40)
Static	2 (2)	28 (27)	30 (29)
Temporary	2 (2)	20 (19)	22 (21)

\* Numbers in parentheses are the number of markets where NTFP are sold;

\*\* There are 2 urban and 40 rural communities.

Table 1 also shows that NTFP were sold in virtually all the markets except in the shops. Had we conducted the study over an entire year, we might have found that more of the shops sold NTFP during other seasons. To the extent that national statistics on purchases of goods and services are based more on records from permanent shops than from traditional markets and hawkers, Table 1 suggests that these statistics systematically understate the value of NTFP.

Although NTFP were sold in most markets, the variety of products was small. We identified nine types: three leguminous fruits, petai (*Parkia speciosa*), kerdas (*Archidendron bubalinum*) and jering (*Pithecellobium jiringa*); two leafy vegetables, cemperai (*Champerea manillana*) and lidah kerbau (unidentified spp.); fern shoots, pucuk paku, (*Athyrium esculentum*); bamboo shoots (various spp.); an herb, asam gelugor (*Garcinia atroviridis*), and mixtures of medicinal roots. The Malaysian rain forest may contain many plants with traditional uses (see Burkill 1935, Jansen *et al.* 1991), but very few continue to be consumed by households that rely on markets as their source of goods.

There appeared to be a greater volume of daily sales of NTFP in farmers' markets than in any other market type. To quantify the importance of NTFP in

these markets, we surveyed sellers in farmers' markets in Kuala Pilah (one date), Simpang Pertang (six dates), and Bandar Baru Serling (seven dates) during October to December, 1991. We requested information on the quantities and prices of NTFP the sellers sold *in the last market* they attended. We asked them about their previous market sales, rather than their sales during the market on the date of the survey, because we found them more willing to provide the former information. Of course, due to imperfect recall, the information provided was subject to error.

As a group, the surveyed sellers also participated in eight weekly, daily, or farmers' markets in addition to the three where we conducted the survey. In total, there are 16 survey dates in urban communities and 38 in rural communities. The estimates we report below for number of products, number of sellers, and revenue per market date are biased downward, because some sellers who participated in previous markets may not have participated in the markets we surveyed.

Urban markets offered a somewhat greater variety of NTFP. On average, 3.8 types of NTFP were sold per date in urban markets, versus 3.2 in rural markets. The reverse pattern held for number of sellers per date: 2.4 in urban markets versus 3.2 in rural. An individual seller in a rural market tended to offer only one type of NTFP for sale, and this was usually the only product he or she sold (sellers were of both sexes, though most were male). A seller in an urban market was more likely to offer more than one product. Due to this difference, and due to a larger number of buyers in urban markets (but not noticeably higher prices), sellers in urban markets grossed nearly three times as much revenue per date as did sellers in rural markets: RM36.00 versus RM13.81 (RM2.70 = US\$1.00 at the time of the survey). If sellers participated in 260 markets per year (52 weeks, 5 markets per week), then based on these averages their gross annual income would range from RM3500 to RM9000. These figures are below the average GDP per member of the labour force in Malaysia (RM11,233 in 1990), even without deducting business expenses.

Revenue from NTFP is low compared to total sales of all products in farmers' markets. The average sales of NTFP per date was RM70.03 in urban markets and RM50.36 in rural markets, while sales of all products in the Simpang Pertang farmers' market, the smallest of the three, averaged RM14,700 per date in 1991.

We requested information about sources of products as well as sales. Table 2 shows the results. The one seller of lidah kerbau collected his supply from the forest, as did half or more of the sellers of bamboo shoots and pucuk paku. Sellers of the remaining products purchased most of their supplies, mainly from middlemen (Malay and Chinese) and Malay villagers. Very few bought directly from Orang Asli, who are generally thought to be the ethnic group most dependent on the forest (Gomes 1986, Ave 1988, Kiew & Hood 1989, Lim 1991). Of course, it is possible that the middlemen and villagers acquired some portion of their products from Orang Asli. The supply channels as well as the market channels for NTFP around Pasoh appear to be quite complex. This would make it difficult to work backwards from data on market sales to determine how much product is coming from a specific forest area.

**Table 2.** Sources of NTFP sold in markets around Pasoh Forest Reserve\*

Products	n**	Cultivated (%)	Collected (%)	Purchased from:		
				Orang Asli (%)	Villagers (%)	Middlemen (%)
Petai	18	-	-	16.7	38.9	44.4
Kerdas	1	-	-	-	-	100.0
Jering	12	-	16.7	16.7	50.0	16.7
Cemperai	31	-	35.5	-	32.3	32.3
Lidah kerbau	1	-	100.0	-	-	-
Pucuk paku	62	-	50.0	-	25.8	24.2
Bamboo shoots	12	-	75.0	-	25.0	-
Asam gelugor	60	3.3	38.3	-	21.6	36.7
Medicinal roots	6	-	-	-	83.3	16.7

\* Percentage of sellers who indicated each source as their major source;

\*\* Number of sellers, distinguished by market, who provided complete information of sources.

## Conclusion

Although Malaysia is one of the most developed countries in the tropics, NTFP continue to be sold in various types of rural and urban markets around Pasoh Forest Reserve. Based on our preliminary findings we hypothesize that most of the consumption of NTFP is based on household purchase in markets, not household collection. The products come to the people, not vice versa.

Only a small number of products is sold, their sales value relative to other goods is low, and they provide a below-average income for sellers. These findings are consistent with the general theory that the importance of forests as a source of extractive products declines during economic development (Vincent & Binkley 1991). In future work we hope to use data from on-going surveys of sellers and additional surveys of buyers to determine the factors that make particular NTFP more likely to persist in importance. These are the NTFP that merit the most attention from forest managers and crop domestication specialists.

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