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BANANA LEAVES MARKETING IN UPLAND AREA A Perspective from Kemang Village, Cianjur District, West Java

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Abstract

In Kemang Village, banana leaves develop quite rapidly. The development of banana leaves is closely related to the role of marketing. The objectives of this study are to analyze the marketing system and the role of institutions in the marketing system.

The marketing agents are farmers, inter-village collector, village collectors, and hamlet collectors. A major portion (around 50%) of the banana leaves is marketed through inter-village collectors. Major portion –around 92-95%– are sold to markets in Jakarta and surrounding and the rest sold to market in Bandung. The targeted market are different, therefore there are no competition among collectors. Sale volume continue to increase around 21 percent per year and reaches its peak in 2004 and decline in 2005. In 2002 was the highest level of buying price as well as selling price and afterward the prices continue to decline. On the contrary, transportation cost tends to increase 18 % per year thus profit margin decline sharply around 19% per year.

Banana leaves still have prospect since leaves' demand tends to increase and leaves' market also broader. Market demand signal received through middleman, quickly responded by the farmers thus in six year's periode planted areas increase three times. The development of banana leaves business is related with the role of middleman who are be able to built network both at the village level and at town level.

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A Perspective from Kemang Village, Cianjur District, West Java

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Introduction

Previous study shows that banana leaves develop quite rapidly in Kemang Village (Ageng et.al 2002, Mizuno and Mugniesyah, 2000). The income from banana leaves on-farm activity has driven economy enhancement of farmer's household. Contribution of banana leaves real income to household total income has increased from 7.6% in 1998 to 13.1% in 2003 (Hartoyo, 2004, and Rachmina, 2004). In addition, dry land real revenue also increased from Rp.42 thousand per are in 1998 to Rp.62 thousand per are in 2003.

At the present, banana leaves is the most favorable commodity for the farmers in Kemang village since it can be harvested continually every 20-30 days, thus it is dependable to fulfill their daily needs. Moreover, if the planted areas are quite vast, farmers are able to harvest daily and save for other needs such as extending land ownership through purchasing, renting or mortgaging. As the result, accumulation of land size is higher overtime. Many farmers build or renovate their houses from banana leaves income. Other than banana leaves, brown sugar and banana fruit also contribute in supporting economy of farmer's household although their income contribution continue to decline.

The development of banana leaves and other agriculture commodities is closely related to the role of marketing institution. Market is an important factor in driving agriculture development (AT Mosher, 1966 and C. Peter Timmer, 1995).

Objectives of the study

Based on the description mentioned above, the objectives of this study are to analyze the marketing system of the potential agricultural products in the upland village and the role of institutions in the marketing system.

Scope and Data

Marketing analysis is focused on potential agricultural products i.e. banana leaves. Data was investigated through marketing organization in Kemang village which comprised of collector and retailer traders. This study is to examine the development of marketing system of agricultural products during the last six years, from 2000 to 2005. Interview with traders was conducted from end of December 2005 to beginning of January 2006 in order to record 2005 data.

Ten respondents were interviewed consisted of 8 village collectors and 2 hamlet collectors. One of the collectors (Mr.A) possessed data of daily prices and leaves purchase from July 2002 to July 2003. Based on the above data, the production and sales fluctuation of leaves in one year can be analyzed.

Organization of Marketing

1. Agents of Marketing

The village marketing agents are farmers themselves and middlemen. The village middlemen of banana leaves consist of inter-village collector, village collectors, and hamlet collectors. Hamlet collector is a branch from village collector.

Most of village collectors and hamlet collectors only sell one kind of farm products. Not many village collectors and hamlet collectors which sell more than one kind of farm products.

Collectors are wholesalers. They collect farm products and delivered to traders in town. There is a hierarchy of collectors, ranging from the hamlet collector at the bottom, to the village collector and on to the inter-village collector at the top. Hamlet collectors collect small amounts of products from neighboring farmers in the same hamlet. Typically, a hamlet collector is tied to a village collector or inter-village collector, from whom he receives an advance payment to finance the purchase of products from farmers, and to whom he then delivers his collection.

Village collectors also collect directly from farmers over a somewhat wider territory encompassing several hamlets or villages. A major difference between hamlet and village collectors is that the latter have much greater autonomy in disposing of their collected products. Village collectors may choose to sell their collections to processors or town trader in other districts. While hamlet collectors are essentially casual employees working on commission, village collectors are independent small-scale traders. In 2005, in Kemang Village, there are 8 banana leaves village collectors, 2 banana fruit village collectors, and few hamlet collectors. The number of village collectors as well as hamlet collectors is higher compare to previous year.

There is only one inter-village collector in Kemang Village. Inter-village collector is similar to village collectors but their activities encompass much wider territories, covering several villages, and they handle a much larger volume of products. They collect farm product from hamlet collectors and also buy directly from farmers. When there is product shortage, village collectors sometimes buy farm products from inter-village collectors.

Farm producers themselves play an important role in marketing their product. It is not uncommon for farmer themselves or farmer's wives and daughters to carry their product to town for sale to traders or processors, expect for farmers who are also traders. Every farm product traders in Kemang village are farmers. The collectors in general, particularly inter village collectors, own farm land wider then common farmers.

In 1994, Sukarela Wana Bakti Cooperative was established, initiated by Perhutani as saving-lending institution in Kemang Village. In 2000, when Perhutani gave banana leaves seeds as aid for Pembinaan Masyarakat Desa Hutan Terpadu (Integrated Forest Community Program) or PMDHT program, the cooperative developed banana leaves marketing business. However, cooperative business was much dominated by its chairman (Mr.A), thus it is difficult to distinguish between personal businesses of the

chairman with cooperative business. Finally, in 2003-2004 the cooperative business was ended and banana leaves marketing business is continued by Mr. A, who is now become the inter-village collector.

2. Marketing Channels

The marketing channels describe the network of marketing agents and farm products flow from Kemang village to consumers. The marketing channels of banana leaves can be seen in Figure 1. Marketing channels for banana leaves begin with farmers. Farmers usually sell banana leaves directly to village collectors or inter-village collectors. However, for farmers who live far from village collectors or inter-village collectors usually sell their products to hamlet collectors and hamlet collectors sell it to village collectors or inter-village collectors. A major portion (around 50%) of the banana leaves is marketed through inter-village collectors and the rest is marketed through 8 village collectors. Percentage of banana leaves sold through inter-village collectors is declining although number of leaves is abundant due to higher number of village collectors. The inter-village collectors have around 20 hamlet collectors, whereas every village collectors have 3 to 5 hamlet collectors.

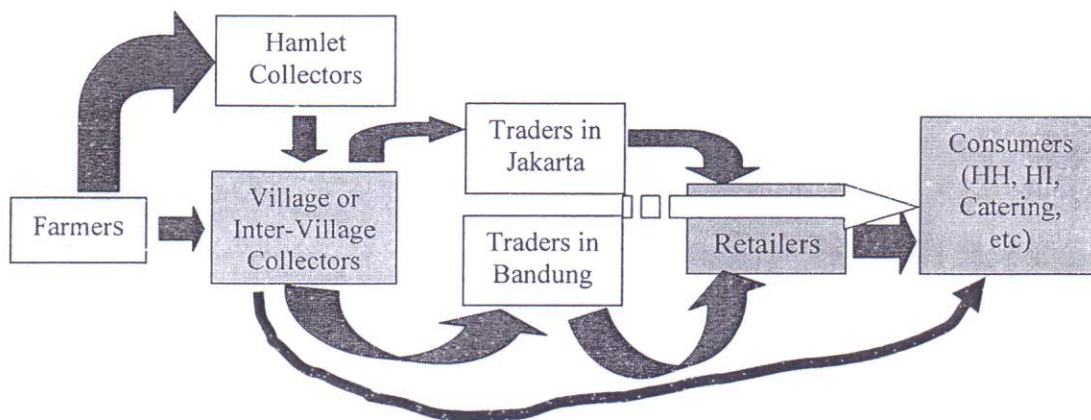


Figure 1.
Marketing Channels of Banana Leaves from Kemang Village

The inter-village collectors sell banana leaves to several wholesalers in Bogor, Depok and Jakarta. In Jakarta, there are 7 markets destination which are Kramat Jati, Pasar Minggu, Senen, Tanjung Priok, Klender, Pulo Gadung and Kalideres markets. Meanwhile in Depok and Bogor, only one markets each. There are 5 village collectors who sell banana leaves to Jakarta's markets, other 3 village collectors sell it to Bandung's markets. In addition, there are also village collectors who sell directly to consumers such as to tempe (fermented soy bean cake) industry and sundanese restaurants, yet the number are few. Banana leaves sales from Kemang village conducted everyday. The targeted market of inter-village collectors and village collectors are different, therefore there are no competition among collectors from Kemang village. Wholesalers then sell banana leaves to retailers or directly to consumers who come to the market.

Market Structure

Market structure can be identified from number of traders and buyers, price determination, bargaining power and market exit-entry barrier. In local marketing, the number of leaves collectors and inter-village collector are no more than 10 persons, while hamlet collectors are more than 50 persons. Meanwhile, number of farmers is abundant since almost every household in Kemang Village plant banana leaves. Farmers are entirely free to choose to whom they sell their products, but they usually choose the nearest collectors. Hamlet collectors live closer to producers than village or inter-village collectors, thus spend less time and effort in contacting farmers and searching for available supply.

Competition among hamlet collectors is often occurred since location among hamlet collectors is close. However, the price received by the farmers is the same which is Rp.10/ponggol cheaper compare to price at village collectors or inter-village collectors. The difference are hamlet collectors fee (Rp. 5/ponggol) and transportation cost (Rp.5/ponggol) from hamlet collectors to inter-village collectors. The price at hamlet collectors is determined by village or inter-village collectors and the hamlet collectors always gain profit. A major constraint on hamlet collectors operation is the shortage of working capital. Farmers who want higher price usually sell their products directly to village or inter-village collectors which cost them more time. In addition to higher price, village or inter-village collectors usually paid in cash (cash and carry). Meanwhile, hamlet collectors will pay the farmers after they sell leaves to village or inter-village collectors. The hamlet collectors are usually provided with capital by village or inter-village collectors although only in the beginning of their work as hamlet collectors.

The village collectors spread out in every hamlet accessible by four wheel vehicle, the most are in Cimenteng Hamlet. Whereas inter-village collectors live in Kemang Village center—the Beber Hamlet. There is no constraint to be village collectors as long as they have access to target market and possess adequate working capital. The competition among village or inter-village collectors is quite fair and often they help each other when one short of leaves or capital. Although there is no written agreement, it can be seen that each village collectors have different suppliers and target markets. This is due to abundant and dispersed farmers so that there is no difficulty on leaves supply. Furthermore, market alternatives are many, hence village and inter-village collectors have different and continue markets.

Based on target market, village and inter-village collectors are divided into two which are target market of Jakarta and its surroundings, and Bandung's target market. Leaves price determination at village level depend on price fluctuation at targeted market. The village or inter-village collectors then determine the buying price from the farmers after calculate transportation cost, treatment cost and profit. Price fluctuation at targeted market is determined by supply and demand.

Leaves production fluctuates over the year, number of leaves increase during rainy season and in contrast decrease during dry season. Production fluctuation will affect leaves supply fluctuation and in the end will also influence leaves' price. Based on Mr. A data (Figure 2), it shows that leaves real price starts to increase in September and reaches the highest price in November, in which the leaves volume at that time is at the lowest level. This condition is difficult to avoid since the major cause is nature.

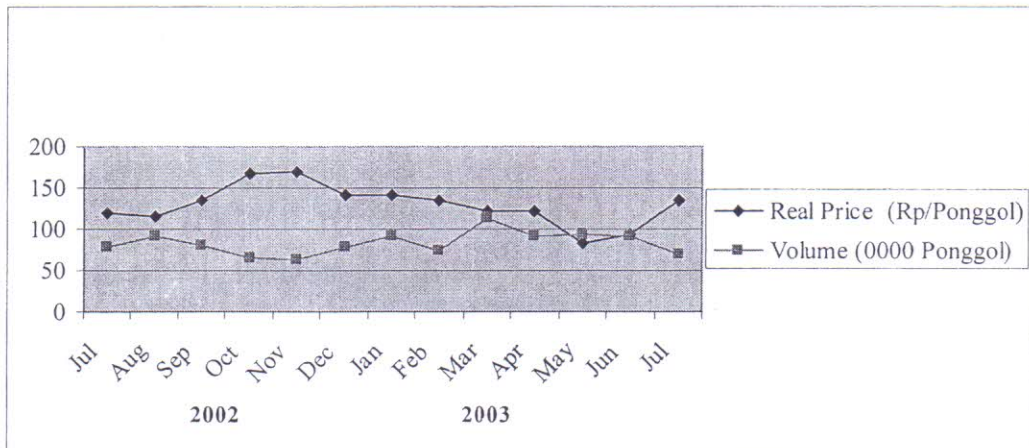


Figure 2

Price and Sales Volume of Banana Leaves from Inter-Village Collector (Mr. A) in Kemang Village, July 2002 – July 2003

In addition to season influence, leaves supply at target market also determined by number of suppliers from other region. At Jakarta market, many leaves are supplied from Cianjur, Jonggol (Bogor), Banten and Purwakarta. According to Mr.A, Cianjur is the main leaves supplier even though its market share continues to decline. One of the reasons is the decrease of leaves' quality. In 2000-2004, leaves' quality from Cianjur was the best in Jakarta which enable them to improve market share. Cianjur's leaves market share hit its highest point in 2003/2004 which was around 70% then declined in 2005 to 15%. The decrease of leaves' quality not only reduced market share but also decreased leaves' price. The high market share of Cianjur's leaves made village collector, especially inter-village collectors have strong bargaining power.

Based on the above description, it can be concluded that leaves market structure is oligopsony, in which there are more than two buyer alternatives, both for farmers as well as village collectors.

Price, Volume and Marketing Margin

Based on data from village and inter-village collectors, Table 1 and Figure 3 present the development of leaves' price, sales volume and marketing margin from Kemang Village period 2000 to 2005. It can also be seen based on target markets which are Bandung's market area (Table 2) and Jakarta's market area (Table 3). Leaves price is real price using basis year of 2002.

In general, sales volume of banana leaves from Kemang Village continue to increase, particularly since 2000 where at that time Perhutani gave the community banana seeds and the right to cultivate Perhutani's land. The rate of sales volume augmentation is 21 percent annually and reaches its peak in 2004 (Table 1 and Figure 3). Leaves sales volume started to decline in 2005, more caused by the decrease of leaves' quality and the high number of suppliers from outside Kemang Village and outside Cianjur.

Approximately 50 percent of leaves' sales volume is dominated by one inter-village collector (Mr.A), which in 2000 has reached 67 percent.

Farmers at Kemang Village in general, pay less attention to banana leaves plant maintenance which decreased the leaves' quality. The plant productivity also decreases since farmers do not rehabilitate the plant. Currently, many leaves plants in Kemang Village age more than 5 years, whereas plant rehabilitation supposed to be done maximum at 5 years of age. Moreover, selection is also not done by the farmers, thus they sell broken and undersized leaves as well. Meanwhile village or inter-village collectors always select the leaves during transaction with the farmers. This is also done when they sold the leaves; village and inter-village collectors conduct sorting and grading so that leaves' quality sold relatively similar according to their grade. They are three leaves grade i.e. good, medium and low. Leaves which are not meet minimum quality standard usually thrown away. Around 10% of total leaves bought from the farmers would be thrown away because it couldn't meet the standard, though in previous years the rate was only 5%. Therefore, the collectors would decrease the buying price of leaves 25% cheaper if the leaves' quality from the farmers is not good or many are broken and undersized. However, the collectors would still buy leaves from the farmers since farmers could not sell the leaves to market in town without collectors. High transportation cost and no market access are the main reasons why farmers are so dependent on collectors.

Table 1.
Trend of Buying Price, Selling Price, Transportation Cost, Profit Margin and Sales Volume of Leaves in Kemang Village, 2000-2005

Description	2000	2001	2002	2003	2004	2005	Growth (%/Th)
Buying Price (Rp/Ponggol)	92	113	133	123	103	91	1
Selling Price (Rp/Ponggol)	177	178	191	178	154	143	-4
Transportation Cost (Rp/Ponggol)	12	15	18	19	22	27	18
Profit Margin (Rp/Ponggol)	73	50	41	35	28	25	-19
Volume (0000 Ponggol/Month)	125	160	211	290	339	301	21
Size of Land (Ha)	208	267	352	483	565	601	24

Buying price tends to increase with slow rate (1% per year), although selling price tends to decrease. On the contrary, transportation cost tends to increase 18% per year thus collectors' profit margin decline sharply around 19% per year. The year 2002 was the highest level of buying price as well as selling price and afterward the prices continue to decline.

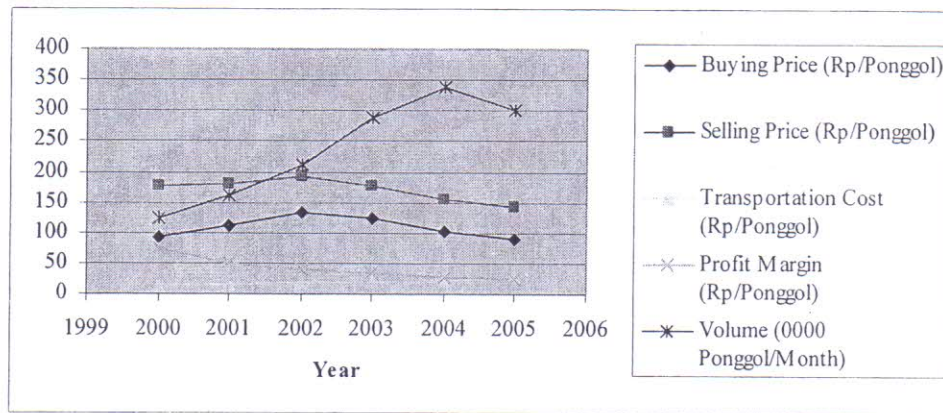


Figure 3.
Trend of Buying Price, Selling Price, Transportation Cost, Profit Margin
and Sales Volume of Leaves in Kemang Village, 2000-2005

Leaves' sales volume per day at the least 5000 ponggol per collectors because if the sales less than that number it would not covered the transportation cost. The highest sales volume is done by inter-village collector (Mr.A) which is 21000-36000 ponggol per day.

Major portion of leaves' sales volume from Kemang village—around 92-95%-- are sold to markets around Jakarta and the rest sold to markets in Bandung's areas. Even though the distant to Jakarta are further than to Bandung, many village or inter-village collectors choose Jakarta as market destination since Jakarta's markets demand are higher and the suppliers to Jakarta are limited. Meanwhile, for Bandung's market, many areas near Bandung also produce leaves and sold it to markets around Bandung.

Table 2 and 3 show that leaves' selling price to Jakarta is higher than to Bandung, so it is reasonable if the buying price from the farmers also relatively higher. Although transportation cost to Jakarta is more expensive but the profit margin gained by the collectors are higher with tendency to decrease, even in 2005 profit margin difference was quite small.

The activities of leaves' sale conducted every day expect during holyday of Eid Fitri, they off for two days. Only one village collector who conducts leaves sale every two days. Village collectors, moreover inter-village collectors have to own working capital minimum 3 times of buying value per day in order to pay the farmers. This is due to the payment of sales to the market which conducted at the fastest on the next delivery (1 day) or some up to one week. The payment from traders at the market usually prompt particularly during dry season where leaves production lessen and on the contrary if the leaves abundant, town traders often delay the payment. However, according to village collectors, most of the leaves' payments relatively prompt. Even almost every village and inter-village collectors have experienced not receiving payments at all with quite large amount of value, reached millions of rupiah. Usually that type of trader would be discarded and village or inter-village collectors would look for other traders.

Buying activities of farmers and or hamlet collectors usually start in mid day because in the morning to mid day farmers harvest the leaves. Afterward, sorting and grading conducted and then the leaves are tied using ropes. Every bunch of leaves contains 3000 leaves ponggol. Later, the leaves are taken to truck or open back van and delivery conducted by drivers and co-drivers in the afternoon. Almost all village

collectors have their own vehicle to transport leaves. They pay drivers and co-drives for every leaves delivery. The driver also trusted to received payment from leaves' buyers.

Table 2.
Trend of Buying Price, Selling Price, Transportation Cost, Profit Margin and Sales Volume of Leaves from Kemang Village to Markets in Bandung, 2000-2005

Description	2000	2001	2002	2003	2004	2005	Growth (%/Th)
Buying Price (Rp/Ponggol)	99	117	110	108	97	92	-1
Selling Price (Rp/Ponggol)	149	166	155	150	141	132	-2
Transportation Cost (Rp/Ponggol)	12	14	13	12	13	18	9
Profit Margin (Rp/Ponggol)	37	35	33	30	31	22	-9
Volume (0000 Ponggol/Month)	10	11	14	17	17	16	11

Table 3.
Trend of Buying Price, Selling Price, Transportation Cost, Profit Margin and Sales Volume of Leaves from Kemang Village to Markets in Jakarta, 2000-2005

Description	2000	2001	2002	2003	2004	2005	Growth (%/Th)
Buying Price (Rp/Ponggol)	89	111	144	129	105	90	2
Selling Price (Rp/Ponggol)	186	187	209	189	159	147	-4
Transportation Cost (Rp/Ponggol)	12	16	21	23	26	30	22
Profit Margin (Rp/Ponggol)	86	60	44	37	28	27	-20
Volume (0000 Ponggol/Month)	115	149	197	273	322	284	21

Based on data of leaves' sales volume per month, and if it is known that every month farmers able to harvest 2 ponggol leaves per tree with average productivity of 5000 ponggol per hectare, then planted areas of banana leaves in Kemang Village can be estimated (Figure 4 and Table 1). Planted areas of leaves plant in Kemang Village expand vastly around 24 percent per year, from only 208 hectares in 2000 to 601 hectares in 2005. According to key informant, prior to year 2000 planted areas of leaves plant were no more than 120 hectares.

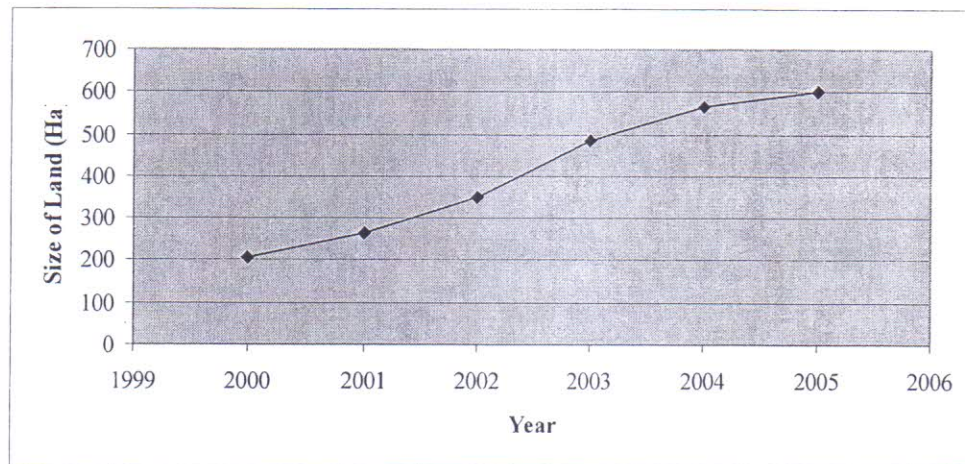


Figure 4.
Trend of Banana Leaves' Land Size in Kemang Village, 2000-2005

As previously explained, the increase of planted areas of banana leaves is closely related with Perhutani policy in giving opportunity to the community to cultivate Perhutani's land. The main reasons that farmers plant banana leaves based on economical consideration which are fast turn over, guaranteed market, low production cost and technical consideration which are easy cultivation, doesn't required intensive maintenances and cultivable on dry land. Economic attraction of banana leaves is more dominant which drives the farmers to concentrate in leaves plant and many farmers plant banana leaves on wetland as well. As the consequence, wetland areas decreased and rice production reduced as experienced by paddy traders who have difficulty in buying paddy from the farmers which force them to look paddy outside Kemang Village. Farmers' orientation to plant paddy is more for self fulfilling, although many farmers buy rice from leaves' sales income. Apart from environmental consideration, farmers in Kemang Village are very rational in choosing agricultural commodities to be produced. The increase of leaves production also encourages the emergent of village collectors and improves the economy of Kemang Village's people.

Leaves productivity varies depend on soil fertility, slope level and maintenance. The highest productivity reaches 10000 ponggol per hectare on fertile lowland, and the lowest is around 3000 ponggol per hectare on very sloppy land. Banana leaves cultivation in Kemang Village usually done in sloppy land ("pasir") thus the average productivity could only reaches 5000 ponggol per hectare.

The Role of Marketing Agents

1. Conducting market penetration, especially in Jakarta and Bandung so that leaves from Kemang Village, as isolated region, able to penetrate market in big cities.
2. Guarantying market for leaves farmers.
3. Paying for cost and risk in form of transportation cost, damaged and reduction cost, cost of capital and lost if town traders don't paid.
4. Giving short-term non interest loan particularly for hamlet collectors.
5. Improving the economy of Kemang Village's people.
6. Encouraging the community to cultivate dry land, in which previously not or less productive.

Conclusion

Seeing from market aspect, banana leaves still have potential prospect since leaves' demand tends to increase and leaves' market also broader. However, quality of leaves also tends to lessen because farmers paid less attention on rejuvenation and maintenance of plants. Implication of the decrease of leaves' quality is the decline of leaves competitiveness and scraped by leaves from other regions. As the consequences, leaves' price tends to decrease and leaves' market share from Kemang Village also decrease although its sales volume continue to increase.

Market demand signal received through middleman, quickly responded by the farmers thus in six year's period planted areas of banana leaves increase three times. In addition to market factor, the expansion of banana leaves planted areas also supported by land availability especially with the support from Perhutani's land. This phenomenon shows that farmers are very rational and think economically in choosing commodity to be cultivated. Farmers choose to produce leaves since market is guaranteed with fast turn over as well as easy and relatively inexpensive maintenance. However, farmers bargaining position toward collectors are still weak especially on leaves' price determination.

The development of leaves business in Kemang Village is related with the role of middlemen who are able to build network both at village level from hamlet collectors to village and inter-village collectors and at town level with the traders. Number of middlemen grows rapidly; nevertheless competition among middlemen seems to be fair, no price war and there is willingness to help each other in term of capital and leaves supply. The relation among middlemen and between middlemen and farmers is based on mutualism.

One of village collectors' strength in facing city traders is leaves' quality, hence leaves from Kemang Village always acceptable at the market. However, the village or inter-village collectors do not have power in price determination.

Seeing from social, economy and market perspectives, development of leaves business is quite fantastic. Nevertheless, from land and environment sustainability point of view, many are still doubtful. Therefore, a comprehensive assessment need to be conducted to see whether banana leaves plant is the plant that able to protect harmonization between nature, human and market demand.

Appendix

Appendix 1.
Perkembangan Harga dan Jumlah Penjualan Daun dari Mr. A
Pada Bulan Juli 2002 sampai Juli 2003

No.	Bulan	Jumlah Daun (Ponggol)		Harga Jual Riil Petani /Ponggol)	Nilai Penjualan (Rp)	
		per hari	per bulan		per hari	per bulan
Tahun 2002						
1	Juli	25,801	774,020	120	3,076,013	92,280,400
2	Agustus	30,231	906,930	115	3,439,433	103,183,000
3	September	26,581	797,430	136	3,571,672	107,150,150
4	Oktober	22,319	647,250	168	3,700,921	107,326,700
5	Nopember	21,218	636,553	169	3,537,483	106,124,500
6	Desember	30,121	783,140	141	4,223,273	109,805,100
Tahun 2003						
7	Januari	30,407	912,214	154	4,719,000	141,570,000
8	Pebruari	28,287	735,470	146	4,107,777	106,802,200
9	Maret	36,381	1,127,800	132	4,780,277	148,188,600
10	April	30,789	923,680	131	3,933,153	117,994,600
11	Mei	30,894	926,817	89	2,710,883	81,326,500
12	Juni	31,162	903,700	96	2,987,448	86,635,980
13	Juli	23,257	697,710	138	3,134,690	94,040,700
	Rata-rata	28,635	805,313	131	3,662,494	103,765,845



CERTIFICATE

To: Ms. Dwi Rachmina

(poster presenter)

*For Participating in the Final Seminar of JSPS –DGHE Core University
Program in Applied Biosciences held during 28-29 February 2008, at the
University of Tokyo, Japan.*

Prof. Kazuhiko Takeuchi

Coordinator

The University of Tokyo