



Republic of the Philippines
Department of Agriculture

Upland Development Programme in
Southern Mindanao (UDP)

**A MARKETING EFFICIENCY STUDY
ON**

ABACA

**IN BARANGAY SOBRECAREY, CARAGA
DAVAO ORIENTAL**

MAY 2001

PREFACE

This report is one of a series of market efficiency studies conducted in the UDP-covered areas for selected commodities. The marketing efficiency of abaca in Barangay Sobrecarey, Caraga, Davao Oriental was evaluated through the deconstruction of existing marketing margins. Recommendations to improve marketing efficiency are herein offered.

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Assemblers:

Aniceto Pagsak
Vilior Mariano

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DEFINITION OF TERMS

Cash costs	-	costs where actual money is involved.
Cash returns	-	the earnings, where actual money is involved, from the sale of the farm produce.
Depreciation	-	the expense brought about by the wear and tear of a piece of equipment, building or tool used in an enterprise for a given period of time.
Exchange labor	-	the value, non-monetary in nature, of the work (in man-days) put in by neighbors, friends or other laborers in exchange for the farmers help with similar farm activities in their respective farms.
Hired labor	-	the cash expense for engaging the services of farm laborers.
Losses/shrinkage of produce	-	the value, non-monetary in nature, of the damages and spoilage sustained by the produce.
Market information	-	basic information on prices and quantities traded of major commodities, from all markets—assembly, wholesale and retail.
Marketing channel	-	the inter-organizational system composed of interdependent institutions tasked in moving the product from production to consumption.
Marketing efficiency	-	the maximization of the input-output relationship where inputs refer to resources (land, labor, capital) used in moving the products from point of consumption to the point of production and output referring to consumer satisfaction on goods and services made available in the market.
Marketing margin	-	the difference in prices between the different levels of the marketing system.
Marketing	-	series of services performed in moving the product from the point of production to the point of consumption.
Net farm income	-	returns of the use of capital and labor. The overall profit of the farm after all the expenses, cash and non-cash,

have been paid off.

- Non-cash costs - costs items used in the production process wherein no direct outlays occurred or the costs incurred are not monetary in nature.
- Non-cash returns - the value, non-monetary in nature, of the farm produce consumed by the farmer and his family or those given away.
- Opportunity cost of capital - the price of foregone opportunity in the use of the capital invested in the enterprise. It is usually pegged at the current savings interest rate.
- Point of consumption - last sale of the product.
- Point of production - point of first sale.
- Profit margin - the return to the middlemen for their entrepreneurship, the risks and the cost of money.
- Return on investment - measures the amount of cash that the entrepreneur gets from the capital investment after first paying the opportunity expenses on the value of family labor and management. It also determines how much money the producer got in return for every one peso invested.
- Unpaid family labor - also called own labor. The value, non-monetary in nature, of work (valued in man-days) by the farmer and his family.

ABACA

INTRODUCTION

1. The abaca plant (*Musa textilis nee*) belongs to the family of *Musacea* and is known worldwide as Manila hemp. It is indigenous to the Philippines with the country's favourable climatic condition and volcanic soils that are suited to its cultivation.
2. The Philippines is the world's largest source and supplier of abaca fiber for the manufacture of cordage and pulp for specialty paper manufacture. While abaca fiber has been used in cordage manufacture for many years now, fiber for pulp in specialty paper manufacture came into commercial use only in the 1930's.
3. In the Philippines, there are three regions which produce abaca in commercial quantity. These are Mindanao, Visayas and the Bicol regions. Each of these regions supply different varieties and hybrids of abaca.
4. Compared to a banana, the abaca plant has more slender stalk, narrower and pointed leaves and has more pronounced dark line on the right hand side of the upper surface of the blade. Its fruits are smaller, non-edible and contain many seeds.
5. It propagates itself through suckering, or the growing of shoots from the roots. When all the leaves have been formed from the stem, flower buds develop, at which time the plant has reached maturity and is then ready for harvest.
6. Under normal conditions, the first harvest is done from 18 to 24 months after planting. Stalks are considered mature and are harvested when the flagleaf appears. The period of good fiber recovery extend for more than one month from flagleaf to early inflorescence.
7. In the harvesting process, which involves mainly the cutting down of the plant, there are two stages, namely: *Topping*, the leaves of the trees to be harvested are cut at the base of the petiole with the use of a knife or sickle fastened at the end of a bamboo or wooden pole. *Tumbling*, the stalks that have just been topped are then tumbled down with the use of a bolo knife. The stalks are cut close to the ground.
8. Davao Oriental ranked 9th in the production of abaca in the Philippines accounting for five percent (5%) of the total production of 64,863 metric tons (DA Agribusiness Report, 2000).
9. In Barangay Sobrecary, Caraga, Davao Oriental, abaca production is one of the main agricultural activities. Farmers harvest abaca four (4) times a year with an average production of 345 kilograms per hectare in an average land holding of 2.75 hectares per farmer.
10. The marketing efficiency study for abaca in Barangay Sobrecarey, Caraga was conducted last March 14, 2001.

Objectives

11. The main objective of the study is to assess the impact of existing marketing systems of abaca vis-à-vis income of the farmers.
12. Specifically, the study aims to determine the levels of participants in the marketing chain of abaca;
13. Determine the marketing practices involved in terms of storage, handling, pricing, delivery systems and terms of payment;
14. Determine the percentage of consumer price that the producer receives through the deconstruction of marketing margins of abaca at each level in the system, exclusive of production costs;
15. Identify strengths and weaknesses of the existing marketing system of abaca; and
16. Determine appropriate marketing interventions needed to improve economic efficiency of abaca in Barangay Sobrecarey, Caraga.

Methodology

17. From the initial agribusiness profile of UDP – Davao Oriental, 35 abaca farmers were identified; four of whom come from Barangay Sobrecarey, Caraga. Complete enumeration of the Sobrecarey abaca farmers was done for the interview.
18. The farmers were asked about their production and marketing practices, production and marketing costs of abaca. They were also asked on available market information with emphasis on what they need to know to improve their production and marketing practices, thereby increasing the farmers' income.
19. The respective buyers of abaca from each farmer were then traced accordingly.
20. The traders were, in turn, asked about their marketing, costs, and the problems and constraints they have encountered in the marketing of abaca.
21. The marketing margins (MM), or the total value added to the abaca per kilogram as it moves along one marketing channel to another, were then deconstructed and the profitability of each marketing participant was also analysed. In the case of the farmers, the Net Farm Income (NFI) was determined. An NFI greater than zero (0) would mean that the production and marketing activities of the abaca farm is profitable, whereas an NFI less than zero (0) would mean that the farm is at a loss.
22. On the part of the trader, the Return on Investment (ROI) was compared with the opportunity cost of capital, pegged at the existing current savings interest rate of eight percent (8%) per annum. An ROI higher than the opportunity cost of capital would mean that marketing abaca is more profitable than just saving the trader's money in a

bank. While an ROI less than the opportunity cost of capital would mean that it would be more profitable for the trader to invest his money in a bank rather than spend it on marketing abaca.

23. The percent share to the consumer peso of each marketing participant was also determined by getting the percentage of the marketing participant's selling price (in the case of traders, less their buying price) relative to the final buying price of the consumer. This indicates the proportion of the final buying price that goes to each marketing participant for abaca.

24. Moreover, focused group discussions (FGDs) with key informants and selected farmers were conducted to probe into the importance and the demand for market information in each province. This provided rapid feedback on the available market information and the information dissemination strategies existing in the area.

25. Also, key informants such as the Municipal Agriculturists and the Agricultural Technicians were interviewed to obtain an overview of the local agriculture industry.

Limitations and Constraints

26. Upon interview, the farmers only recalled past production level, income, farm tools and equipment used, as there were no records kept of their operations. Thus the cost and return that were analyzed were only estimates. The Return on Investment (ROI) was excluded on the analysis of the farmer's income due to the ambiguity of the values arrived at, as some factors on capital investment were not quantified. For instance, land valuation was excluded because none of the farmers hold titles to the land that they cultivate. Land, therefore, was not considered a fixed investment in this enterprise and was merely considered as an expense through the credit of land cost (land tax if owned, rent if tenanted).

27. On the marketing aspect, the respondents interviewed were the middlemen identified by the farmers. Most of who also based their answers on their memories since they too do not keep records of their marketing operations.

28. On the analysis of the marketing efficiency of the farmers, only the Net Farm Income (NFI) analysis was utilized since the available data could only allow for this kind of analysis and not the more complicated input-output efficiency analyses.

29. Lastly, the size of the abaca market, specifically, the estimation of demand was not included in the study.

Margin of Error

30. Aside from the UDP Agribusiness Profile, there are no other available data on the population size of abaca producers in the area. The margin of error on the

analysis, therefore, cannot be established since the formula requires not only the sample size, but the population size as well.

THE MARKETING SYSTEM OF ABACA

Marketing Channels

31. The marketing participants involved in the abaca marketing system in Barangay Sobrecarey, Caraga are as follows:

a. Farmer

A person engaging in the production and post-production activities such as tuxying, stripping, drying, grading and bundling for commercial purposes.

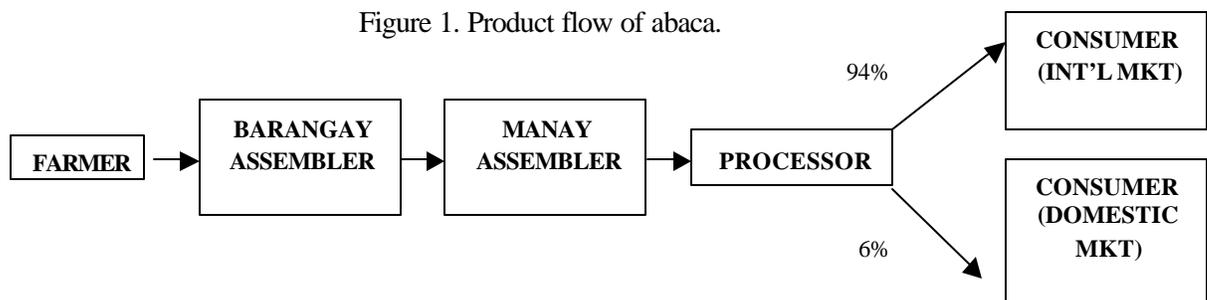
b. Assembler

A person who buys the fiber from all the farmers in the area then sells the bulk to the processors. There are two assemblers existing in the marketing chain, the barangay assembler and the assembler from the neighbouring town of Manay.

c. Processor

An institution that processes fiber into cordage, pulp, paper and fiber craft.

32. Based on farmer interviews, an estimated 3,800 kilograms of abaca from Barangay Sobrecarey, Caraga, Davao Oriental were sold in the year 2000 and the following product flow was established:



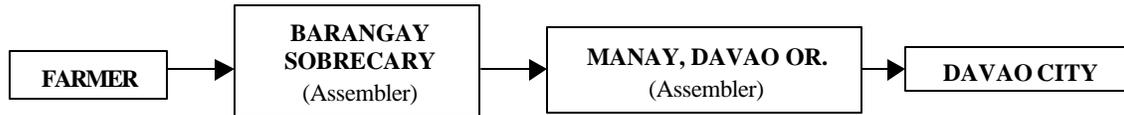
33. From the farmer, abaca is sold at an *all-in* scheme to the barangay assembler and is then passed to the big scale assemblers located in Manay. From there, it is sold to the processors of abaca line-products whose main consumers are the international and domestic markets (Figure 1).

34. The processors set no limit on the volume bought from the assemblers because of the high demand on the processed fiber in domestic and international markets. This increasing demand can be attributed to the discovery of other potential uses of abaca.

35. Based from statistics gathered from the Fiber Industry Development Authority (FIDA), Region XI, almost 94% of the Philippine abaca production is exported while the remaining 6% is used domestically.

36. Shown below is the geographical flow of abaca.

Figure 2. Geographical flow of abaca.



37. The geographical flow for abaca moves from the barangay centre to the first assembler within the barangay. From there it is delivered to another assembler in the neighbouring town of Manay who then sells the produce to processors in Davao City (Figure 2).

Marketing Activities and Costs

38. After harvesting, numerous activities are done in abaca such as peeling, stripping, drying, grading and bundling.

39. Peeling is the method of extracting the fiber from the leaf sheaths. Entire leaf sheaths are separated from the stalk and are flattened. A specially made tuxying knife is used to make an incision through the inner and middle layer of each sheath, close to the base or butt end to facilitate the separation of these layers from the outer layer.

40. After the fiber is peeled the next step is stripping. Stripping is the method of cleaning the abaca fibers through the use of stripping knives. *Handstripping* method is very simple and is fully manual, but is very strenuous on the part of the stripper. The tuxy is inserted between a block and the serrated (or non-serrated) stripping knife. The fiber is pulled with force from the tip end of the tuxy. It is here where the fiber separates from the wastes.

41. All stripped fibers undergo drying before being graded. They may be sun-dried in the open or air-dried in shaded structure.

42. Due to farmers' lack of knowledge of the grading/classification system set by FIDA, the farmers only classify the fiber in three classes according to its color. Class A for white fiber, Class B for yellow and Class C for fibers with black spots.

43. In the barangay alone, there are a few assemblers present and living to whom the farmers would sell their produce. The farmers are able to get financing from the traders that may come in the form of capital, food or other household supplies.

44. The abaca is normally transported using a motorcycle. This is due to poor road condition that can only be accessed by the motorbike especially during rainy days. The maximum capacity that the motorcycle can hold is five (5) tons, but normally the trader only loads three (3) tons.

45. From there, the abaca is brought to an assembler in the town of Manay. In the town of Manay, there are already five existing buyers of abaca. Competition here is very stiff since everyone tries to offer the best, in this case the highest price to the farmer or assembler. After reaching a minimum volume of 20,000 tons, these assemblers in the Manay poblacion sell their stocks to major abaca producers and exporters in Davao City.

46. In Davao City, abaca is graded into about 10 grades. The price received for the highest grade is approximately P30.00 per kilogram while the inferior grade is worth only P2.50 per kilogram. The buying mode of the processors is that they would pay only 70% of the total value of the delivery. They would first sort the fibers into its different grade categories, then after two weeks, the company would pay the remaining 30%.

47. Farmers incurred a high post-production cost, which resulted to the negative net farm income (Table 1). This high post-production cost can be attributed to the labor-intensive nature of abaca in the farm level.

48. Costs incurred by the assemblers are mainly the transportation cost of transferring the commodity from the farm to the processor.

Table 1. Marketing costs for different marketing levels of abaca (P/kg).

ACTIVITY	FARMER	BARANGAY ASSEMBLER	MANAY ASSEMBLER
Peeling	1.54	<i>na</i>	<i>na</i>
Stripping	1.54	<i>na</i>	<i>na</i>
Drying	1.58	<i>na</i>	<i>na</i>
Bundling	1.57	<i>na</i>	<i>na</i>
Transportation	2.45	0.47	0.52
Labor	<i>na</i>	0.10	0.1
Utilities and other fees	<i>na</i>	0.01	0.01
TOTAL	8.68	0.58	0.63

Price Formation

49. In March of last year, the farm price for abaca was P22.00 per kilogram. Within a span of one year, the farm price has decreased to P15.00 per kilogram. This

can be attributed to the fall of abaca world price, which, in turn, is due to the entry of cheaper abaca substitutes such as rayon, kenaf and sesal.

Marketing Margins

50. Shown below is the marketing margins and income for different marketing levels.

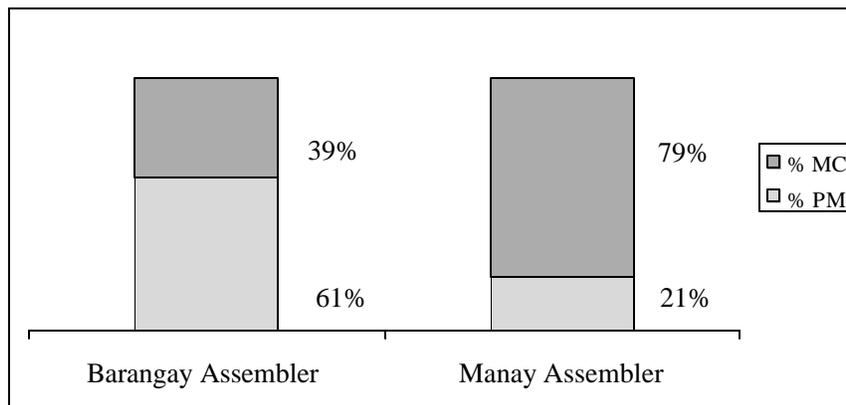
Table 2. Marketing margins and income for abaca at different marketing levels.

ITEM	Farmer	Barangay Assembler	Manay Assembler
Selling Price	14.00	15.50	19.50
Buying Price	<i>na</i>	14.00	15.50
Marketing Margin	<i>na</i>	1.50	0.80
Marketing Cost	8.68	0.58	0.63
Profit Margin	<i>na</i>	0.92	0.17
Net Farm Income	(3.41)	<i>na</i>	<i>na</i>
MC as % of MM	<i>na</i>	39%	79%
PM as % of MM	<i>na</i>	61%	21%
% ROI	<i>nil</i>	14.00%	2.72%
Opportunity Cost of Capital	<i>na</i>	8%	8%

51. Results revealed that the farmer has a negative income in abaca farming (-P3.41/kg) (As shown in detail on Appendix A). On the other hand, the profit margin for barangay assembler and the Manay assembler are P0.92 and P0.17 per kilogram, respectively (Table 2).

52. Graphically, Figure 3 illustrates the marketing margins presented on Table 2.

Figure 3. Marketing margins of abaca traders.



53. A comparison of the two assemblers show that the Barangay Assembler's profit is higher than that of the the Manay Assembler, relative to their marketing margins. This means that relative to the price mark up made by the two assemblers, the Barangay Assembler has made more profit than the Manay Assembler.

STRENGTHS

54. The greatest strength of abaca is its established market for fiber such that the industry is always assured of buyers.
55. Also, as abaca is an industrial commodity, post-harvest practices and technologies, such as the creation of stripping equipment, have been developed to improve the quality of abaca.

WEAKNESSES

56. However, the marketing system is also faced with several problems that hinder the industry's development. One such problem or weakness is the difficulty in dissemination information on new technologies to improve abaca production such that the innovations do not reach the farmers.
57. Consequently, the farmers are stuck with antiquated production and post-harvest facilities and know-how, which causes the marketing, particularly the post-harvest cost to increase.
58. Also, it was established that the farmers have inadequate knowledge on the grading classifications set by FIDA. This results to a lower income since the farmers are not able to produce good-quality, high-priced abaca.
59. Lastly, the poor condition of the Caraga Highway-Sobrecarey tertiary road has led the farmers to depend on the assemblers buy their produce as they do not have the facilities to transport the abaca themselves.

OTHER KEY FINDINGS

60. It was also determined that there is high production cost for abaca. This resulted to the negative Net Farm Income of the farmers in Barangay Sobrecarey, Caraga (Appendix A).
61. Lastly, it was established that most of the plantations are already old, disease-infected and damaged by typhoons.

CONCLUSION

62. A negative Net Farm Income in the farmer side indicate the inefficiency of abaca production (Table 2).
63. It was also established that the ROI of the barangay assembler is higher than the opportunity cost of capital and his percentage share of the profit margin relative to the marketing margin than the cost. It is concluded, therefore, that the barangay assembler is performing efficiently.
64. In contrast, the Manay assembler performs inefficiently due to its high marketing cost and ROI is less than the opportunity cost of capital. This means that it is more profitable to invest in the bank than venturing in the abaca trading activity of the Manay assembler.

RECOMMENDATIONS

65. Based on the strength, weaknesses, other key findings and conclusions established in this study, the following recommendations are herein offered:
 - ?? Transfer new technologies on production and processing to the farmers to increase the value added to the commodity. It will also help to produce quality fiber at competitive cost with substitute products;
 - ?? Provision of post harvest facilities such as peeling and stripping equipment to the farmers will greatly help them gain more income through the reduction of their post-harvest costs;
 - ?? Improve farm to market road to ease the transferring of goods to the processing area, thus decreasing the cost of transportation;
 - ?? Proper information on the grading standards in abaca should be given to the farmers.
 - ?? Other uses of abaca such as handicraft making, tinalak production, etc can be taught in the farm level to increase the income of the farmers.

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APPENDIX A. Cost and returns per unit of abaca in Barangay Sobrecarey, Caraga.

ITEM	P/kg
RETURNS	
Cash	
Sales	14.00
Total Cash Returns (A)	14.00
Non-cash	
Total Non-cash Returns (B)	-
TOTAL RETURNS (C)	14.00
COSTS	
Cash	
Planting material	5.00
Hired labor	10.30
Transportation	0.39
Total Cash Costs (D)	15.69
Non-cash	
Unpaid family and/or exchange labor	0.10
Depreciation	0.27
Losses/Shrinkage of produce	0.09
Opportunity cost of capital	1.26
Total Non-cash Costs (E)	1.72
TOTAL COSTS (F)	17.41
Net Returns Above Cash Costs (C-D)	(1.69)
Net Farm Income	(3.41)

APPENDIX B. Breakdown of costs per unit of abaca in Barangay Sobrecarey.

ITEM	P/kg
I. Production Cost	
Depreciation	0.27
Own labor	0.03
Corms (Planting material)	5.00
Hired labor	2.17
Total Production Cost	7.47
II. Marketing Cost	
A. Peeling	
Own labor	0.01
Hired labor	1.53
Sub-Total	1.54
B. Stripping	
Own labor	0.01
Hired labor	1.53
Sub-Total	1.54
C. Drying	
Own labor	0.04
Hired labor	1.49
Losses/shrinkage	0.05
Sub-Total	1.58
D. Bundling	
Own labor	0.01
Hired labor	1.52
Losses/shrinkage	0.04
Sub-Total	1.57
E. Transportation	
Hired labor	2.06
Transportation	0.39
Sub-Total	2.45
Total Marketing Cost	8.68
III. Opportunity cost of capital	1.26
TOTAL COSTS	17.44