THESIS

BANANA MARKETING PERFORMANCE IN BLANTYRE AGRICULTURAL DEVELOPMENT DIVISION, MALAWI

Submitted by

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In partial fulfillment of the requirements

for the Degree of Master of Science

Colorado State University

Fort Collins, Colorado

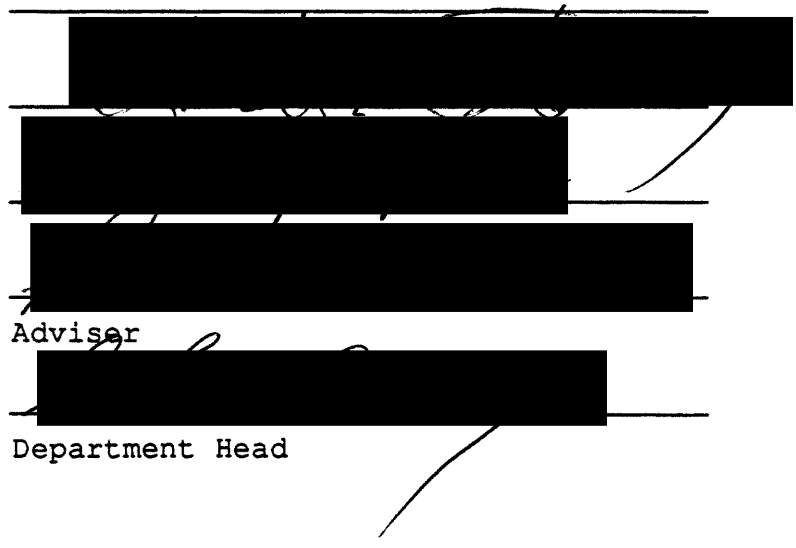
Fall 1990

COLORADO STATE UNIVERSITY

May 1, 1990

WE HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER OUR SUPERVISION BY JOSEPH D. NDENGU ENTITLED BANANA MARKETING PERFORMANCE IN BLANTYRE AGRICULTURAL DEVELOPMENT DIVISION, MALAWI BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE.

Committee on Graduate Work



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ABSTRACT OF THESIS

BANANA MARKETING PERFORMANCE IN BLANTYRE AGRICULTURAL DEVELOPMENT DIVISION, MALAWI

This study provides insight into the complexities underlying the marketing of bananas in Blantyre Agricultural Development Division (A.D.D.), in southern Malawi. While farmers formed the core of the study, varying numbers of wholesalers/ dealers, retailers and truckers were also contacted.

A dualistic system of marketing operated in the area; that is, farmers sold their bananas both directly to consumers and also through middlemen. Sales, in order of importance based on patronage, were directly to the urban markets by the farmers themselves, to the middlemen/traders, to the village or roadside markets and lastly to the local markets.

The most important problem was that of transportation, especially in getting the bananas to the urban markets. The main issue was the condition of the outlet road system. It appears that there is a lot of risk taking on the part of the truckers who opt to operate in the area.

A detailed market performance analysis was not possible due to the paucity of relevant data. However, imperfect indicators of performance were highlighted. These included physical losses as bananas passed through various channels; price setting by

market authorities; erratic supplies and inconsistent volume measures.

Retail prices for a period of 69 days showed highly significant differences among mean prices of the three grades of bananas - large, medium and small. There appeared to be no relationship at all between the price movements for the large and medium size bananas. However, those for large and small, as well as medium and small, showed considerably higher degrees of positive association.

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ACKNOWLEDGEMENTS

A number of individuals and institutions made this study possible. While not all can be mentioned, I feel so indebted to some of them that listing them is just in order.

Special thanks go to my adviser who was also chairman of my committee, Professor Ronald L. Tinnermeier. His untiring support for, and interest in my work, gave me a special feeling of confidence throughout my study period. I indeed, am grateful to him. I also thank Professors Stephen P. Davies and Linda R. Stanley for their valuable suggestions at various stages of the study. Professor William P. Spencer agreed to join my committee to replace Professor Davies who had to leave the country. I wish to sincerely thank him too.

Iam also grateful to Dr. D.H. Ng'ong'ola of Bunda College of Agriculture who was my in-country advisor when I was in Malawi to conduct research for the study. His review of the questionnaire as well as his subsequent suggestions are greatly appreciated.

I wish to thank, above all, the Malawi Government for allowing me to persue studies for a higher degree. I do not only feel honored, but also sincerely feel indebted.

Lastly, I would like to thank all my friends and relatives for their encouragement and keeping the communication channels open to me at a time when I was half the world away from home. In this regard, my wife deserves special mention.

AUTOBIOGRAPHY

The author was born on August 16, 1958 in a village called Mzambazi in Mzimba district of northern Malawi. He did his undergraduate studies at Bunda College of the University of Malawi from October 1977 to July 1982. Soon after obtaining a B.S. in Agriculture, he joined the Department of Agricultural Research of the Ministry of Agriculture where he worked as Adaptive Research Officer, Economics, up to December 1987. In January 1988, he left Malawi for the United States of America to pursue studies for a Masters degree in Agricultural Economics at Colorado State University.

DEDICATION

To Nancy and our parents

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CHAPTER I

INTRODUCTION

1.1 Geographic Location and the Agricultural Development Structure of Malawi

Malawi is a small country (the size of New York State in the United States of America) occupying the southern part of the East African Rift Valley, lying between 9 degrees and 17 degrees south of the Equator (See Fig. 1). The total area of the country is 119,140 square kilometers of which 20 percent is water. Malawi is landlocked by Mozambique in the south and east, Zambia to the west and Tanzania to the north. The topography of the country is quite varied from the Rift Valley floor almost at sea level to the mountains rising to 3000 meters; hence it accommodates a diverse range of climate, vegetation and economic activity.

There are three seasons, a cool dry period from mid April to mid August, a hot period between mid August and November, and a period of tropical rains from November to April. Rainfall varies from 800 millimeters to 2500 millimeters annually.

The population of the country is about 7.7 million and grows at an annual rate of 3.2 percent. About 50 percent of the population is under 15 years of age and 51.8 percent is female. The population is largely rural as only 11 percent of the population lives in an urban environment.

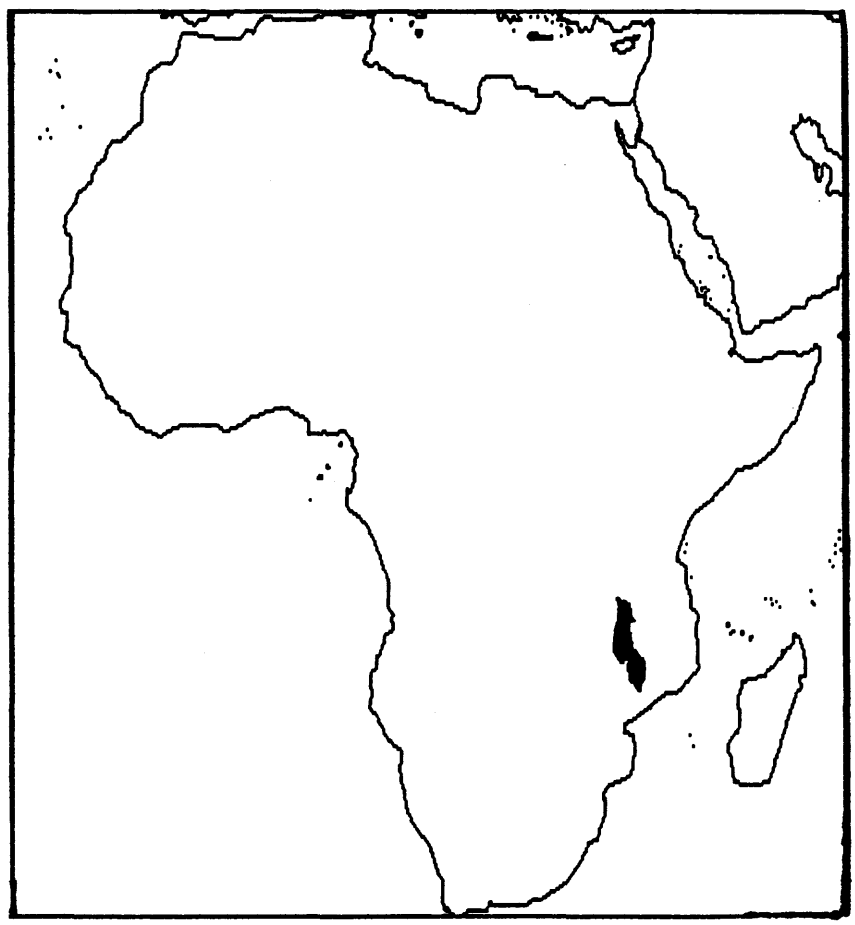


Fig. 1. The Geographic Location of Malawi in Africa

The economy of Malawi, like that of many developing countries is agriculturally based. This sector employs 85 percent of the labor force, produces 37 percent of the Gross Domestic Product (GDP) and accounts for 90 percent of export earnings. Indeed, the Government is committed, not only to achieving increased productivity in this sector, but also doing so on a sustained basis. To this effect, the country was divided into 8 zones called Agricultural Development Divisions (ADDs). Fig. 2 shows these divisions and in particular the Blantyre Agricultural Development Division.

Within each ADD are found two types of agricultural production systems, the Estate and the Smallholder sectors. The former comprises large scale producers cultivating mainly agronomic cash crops such as tobacco, tea and sugar. The latter is where the majority of Malawians work cultivating smaller areas of both agronomic and horticultural crops (fruits and vegetables). The total volume of fruits produced is large but the amount produced by each individual farmer is relatively small. The same is true of banana production in Thyolo South Extension Planning Area (EPA), which together with its main markets in Blantyre City[1] are the main focus of this study. This is probably the single most important banana production area in the country.

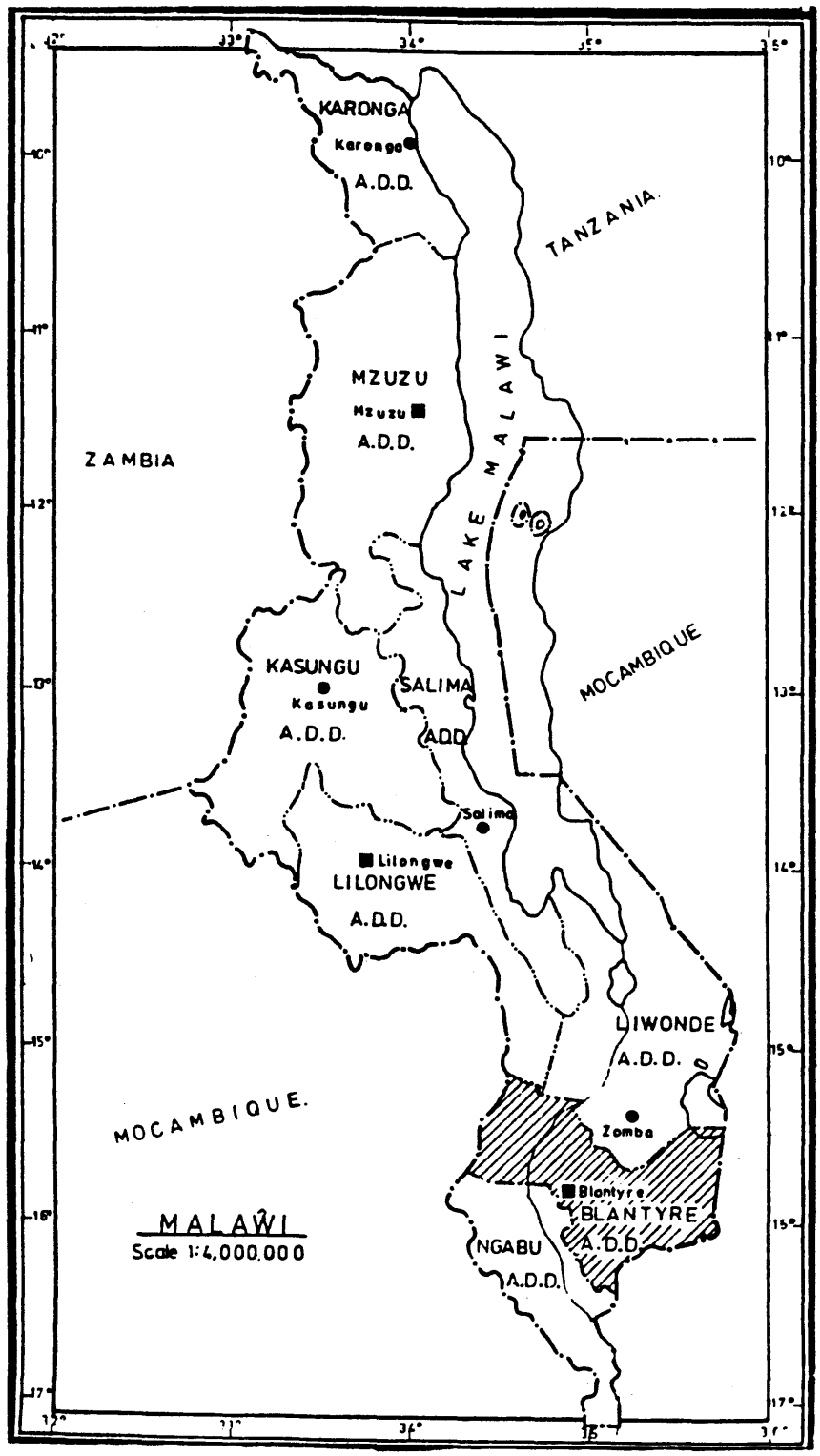


Fig. 2. Malawi's Eight Agricultural Development Divisions

1.2 Marketing of Agricultural Produce in Malawi

The activities that take place from the production of bananas until the time they reach consumers, are collectively termed marketing activities. When looking at agricultural development issues, it is very important to view production and marketing as two interrelated and interdependent activities. Indeed, an inefficient marketing system acts as a disincentive to farmers and thus lowers production. Lentican (1983, p. 8), states that the gains in the production system as a result of improved technology, infrastructural development, or better financing schemes will not have much impact on the incomes of the rural population if the marketing system is inefficient. He continues to say that production is considered as the "door" to agricultural productivity and marketing as the "key" that opens the lock. Formal definitions of marketing may be as many as are the books that have endeavored to define the term. One good definition for the purpose of this study is that by Abbott (1986, p. 1), who defines food and agricultural marketing as:

> . . . the movement of agricultural produce from the farm where it is produced to the consumer or manufacturer. This includes physical handling and transport; initial processing and packing to simplify handling and reduce wastage; grading and quality control to simplify sales, transactions and meet different consumers' requirements; and holding over time to match concentrated harvest seasons with continuing demands of consumers.

The marketing of agricultural produce in Malawi can be divided into two broad categories. Firstly, there are agricultural products for which an organization sanctioned by the

Government exists and is charged with the responsibility of purchasing surplus produce from the many fragmented producers. The most important of such bodies is the Agricultural Development and Marketing Corporation (ADMARC). The produce catered by this and other smaller organizations mostly involves non-perishables. The other side of the marketing system involves the perishable produce, notably fruits and vegetables. For these, the producer shoulders all the risks involved in having his produce marketed. It is under this set of circumstances that banana producers in Thyolo South EPA have to operate.

Marketing activities are performed by different players, each of whom has a different purpose: Kriesberg (1974, p. 19), says:

> Farmers see marketing as a means by which the portion of their product that they want to sell can be transferred to a purchaser at a price the farmers are willing to accept. Consumers are concerned with buying the products they want in the forms, places and quantities they want, at prices they are willing to pay. Both farmers and consumers see marketing as serving their needs. They often fail to recognize the many functions that take place to accomplish this. Middlemen perform these functions and consequently they tend to view the marketing system as a means of earning their livelihood as well as satisfying their needs as consumers.

Because marketing systems serve people with different interests, who want the system to achieve different ends, efforts to evaluate marketing must involve a thorough study of the activities that take place at each of the three levels. It also must be evaluated against a multidimensional set of performance criteria.

1.3 Background and Objectives of the Study

Malawi's road to economic development has reached an important stage. The accelerated pace of development enjoyed since independence has impinged greatly on the marketing sector and vice versa. Urban centers have experienced rapid increases in population growth. For instance, the Food and Agricultural Organization of the United Nations (FAO) projected in 1980 that the population of Blantyre, the largest city in the country, would have its population jump from the then 400,000 to 900,000 in 1990 and then hit 1.5 million by the year 2000. There is reason to believe that the rate of population increases in the other cities, Lilongwe, the capital and Mzuzu, the youngest city among them , may be similar. Such trends in urban development as well as the general improvement in the standard of living of the people cause serious challenges to the food marketing system. As the economic development of a country proceeds, the gap between farm and consumer widens and the tasks of marketing become more complex (Abbott, 1979, p. 24). People begin to demand better grading, packaging and overall improvement in the quality of the food products. Improvements are necessary, especially in the marketing of fruits and vegetables, for the marketing system to meet these new demands as well as play its dual role of acting as a catalyst to increase production on the farms and providing food to urban residents at affordable prices. Without well-functioning markets and marketing activities in the food system from producers to consumers, there is not only wastage due to

inefficiencies, but there is also an impediment to passing on higher on-farm productivity to consumers in the form of lower real prices and higher, more stable supplies (Goetz and Weber 1986, p. 2).

Bananas are a very popular fruit as dessert and snacks for families in Malawi. The production, however, is concentrated in selected areas. Thyolo, which is located in Blantyre A.D.D., is a very important banana producing area and hence its selection for this study.

A small, informal multidisciplinary survey of the study area was conducted in September 1987. During that survey, it was established that bananas were the most important crop in the area and that marketing was the major problem. It was also learned that in the area, the bulk of the staple food (maize) was purchased mainly from the proceeds of banana sales as maize did not do as well as bananas in the area. The roadside markets all had bananas for sale and the main urban market of Blantyre was about 200 kilometers away through a not-all-weather-passable road.

The marketing of bananas in this area then, is not just a bridge between a production and a consumption area. Nor is it just a means without which "...a subsistence peasant can not "graduate" into commercial farming ..." (Bauer, 1974, p. 30), the channelling of the income into the procurement of the most important basic necessity, food, lends a special and more

delicate dimension to the role of marketing in the area and hence the need for a detailed study.

The objectives of this study therefore, are to provide insight into a system that appears complex; and to provide an understanding of the various components of the chain of activities taking place from production of bananas to their marketing to the ultimate consumer. Also, it was hoped that "loose" parts of the chain of activities could be identified and solutions suggested. Specifically, objectives were to:

1. Identify the organizational structure at the retail, wholesale and farm levels,
2. Identify the services that are rendered at the various stages in the system,
3. Identify the prevailing price spreads,
4. Identify factors affecting choice of marketing channel to use,
5. Shed light on the activities of the truckers, and
6. Identify any bottlenecks in the marketing channel that may have negative effects on production, information flows, or economic coordination.

1.4 The Thyolo South EPA

The Blantyre Agricultural Development Division is composed of four sub-divisions called Project areas. These are Phalombe, Mulanje, Mwanza and Blantyre/Shire Highlands. Project areas are further divided into Extension Planning Areas (EPAs) and Thyolo

South is one such area in the Blantyre/Shire Highlands Project. It is divided into six sections for extension administration purposes each of which is run by a Field Assistant who is the person in direct contact with farmers (see Fig. 3).

The area has a total of 12,767 farm families, 43 percent of whom are female headed. The land holdings are generally small (average of 0.60 ha), due to the high population density in the area (252 persons per square kilometer).

1.5 The Organizational Overview of the Study

The second chapter, provides a review of the marketing issues in literature. The importance of marketing to any productive process, and thus to the economic development of a country, has been highlighted. Special emphasis however, has been placed on performance - definition as well as criteria.

Chapter three discusses the methodology that was used during the entire study. Survey conducting technics that were employed are outlined and elaborated upon. A stratified random sampling method was used for the main part of the study - focusing on the producers/farmers.

The findings are presented and discussed in the fourth chapter. An effort has been made to provide as detailed an account of the marketing system as the available information could permit. The last section of this chapter makes a quick assessment of how the banana marketing system in Malawi is

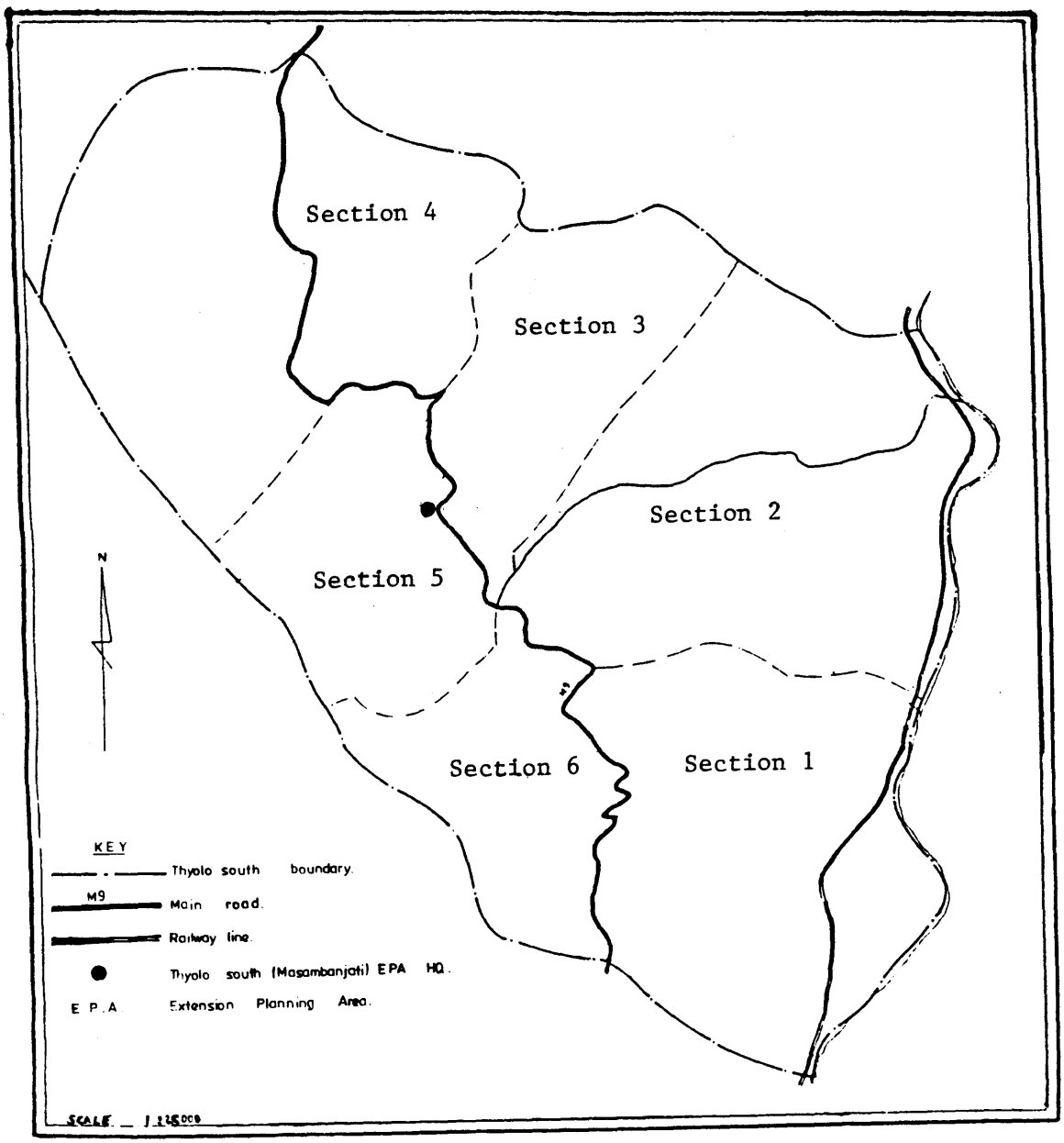


Fig. 3. Thyolo South EPA and Its Six Sections

performing. Based on these findings, the last chapter provides a summary of the main issues from the study and their implications towards the agricultural marketing policies of the country. To this effect, the chapter also carries some suggestions for smoothening what might have appeared like hiccups in the marketing system.

ENDNOTE

[1]The main markets of Blantyre City are Blantyre and Limbe Markets. There are also a number of smaller markets including Ndirande which was also included in this study.

CHAPTER II

REVIEW OF LITERATURE

2.1 Marketing of Perishable Crops in Developing Countries and Malawi

Marketing links production and consumption in such a dynamic relationship that changes in either bring about corresponding change on the opposite side. This means that improvement in one must be accompanied by corresponding improvement in the other if the system is to work efficiently. Over the years, this has not been so in many countries, particularly developing ones. Traditional methods of attacking rural development continue to garner most of the resources, agricultural production studies and projects take priority, while needs of urban consumers and nutrition problems rarely become criteria in agricultural policy (Slater, 1974, p. 3). The result has been that agricultural production successes or impacts thereof, have been rather masked by inefficient marketing systems. Slater wrote:

> Marketing, including the government elements of distribution processes, is but a small share of the total economy, rarely more than 10 percent of the value added to the Gross Domestic Product (GDP). However, marketing channels affect the distribution of shares of income and influence the marginal efficiency of capital in the manner of a chemical catalyst.

The importance of marketing can further be shown by the saying that "a good farmer has one eye on the plough and the other on the market" Khan, in Lopez (1989, p. 16). Obviously, how much he will produce will very much depend on the opportunities he perceives in the market. Limited opportunities in the market call for production levels that are below potential. Marketing is evidently one of the locomotives that pulls the development train (Izraeli and Meissner, 1974, p. 192). Expanding markets, thereby making them absorb more of the marketable produce, as well as ensuring that this process takes place efficiently, must be viewed at par with expanding production. Indeed, "production and marketing distinctions are unnecessary" (Harrison et al, 1974, p. 9).

Bananas, alone among all tropical products traded internationally, have rarely been a topic of economic research (Valles, 1968, p. v). He continues to say that this lack of interest may be partially explained by the fact that bananas are exported by small underdeveloped countries; that imports are controlled by a few companies; and that no commodity exchanges have listed them. Valles concludes by saying that for many developing countries, bananas are of vital importance.

The foregoing does not imply that there has not been research involving bananas. A number of studies have been done within the commodity grouping "fruits and vegetables." Palmer (19.., p. 140), stated that in Malawi and many other developing nations the internal marketing of farm produce, especially the

marketing of fruits, vegetables and staple foods, had long been a neglected area. He noted however, that over the years, because of the increase in economic development in these countries, growth of population and consequent increase in urbanization (and therefore the number of people relying on these food supplies), the internal marketing of produce has taken on a new importance.

According to Arthur et al (1963, p. 3), there are important reasons for choosing the banana industry as a subject for research. Although bananas are grown exclusively in the tropics, they are consumed practically in every country of the world (Arthur et al, 1968, p. 3). In addition, they note that bananas are one of the major products of international trade. Arthur et al conclude by saying that, bananas, second only to milk as the world's largest volume ready-to-eat food product, are, without doubt, the world's most widely consumed fruit.

By their very nature, fruits and vegetables pose very unique problems in marketing. Harrison et al (1974, p. 63) had this to say:

> The production-distribution subsystem for fruits and vegetables is more complex and probably more difficult to rationalize than subsystems for other major commodity groups. Due to biological production characteristics, there are usually both seasonal and year to year variations in output associated with wide price fluctuations. Most fruits and vegetables are relatively perishable, and product losses in marketing are often substantial. These characteristics contribute to relatively high risks for both consumers and intermediaries, and to complex production and distribution organizational problems.

This means that the evaluation of the performance of such subsystems would not be an easy task. This is compounded by the

fact that performance evaluation of a system per se can be quite a precarious undertaking.

2.2 Marketing Performance Concepts

Apparently, there have been differences of opinion among economists as to whether marketing systems should be evaluated according to elements of economic efficiency or performance. Jesse (1987, p. 221), favoring the latter, argues that a narrow focus on economic efficiency measures that involve producer and consumer surplus is inappropriate since intangible measures of social welfare referenced by legislative intent would not likely be included in these measures. He asserts that performance includes a broader spectrum of economic attributes than efficiency. Further, using performance as an evaluative guideline avoids a tendency to concentrate on efficiency indicia that are easily measurable (Jesse, 1987, p. 221). Harrison et al (1974, p. 9), state that an emphasis on broad performance objectives recognizes that the goal of increasing per capita GNP or reducing the cost of achieving a particular goal (the economic efficiency criteria), is not enough. Other authors, for example Lentican (1983, p. 8), have also expressed similar sentiments. Another item favoring the use of performance criteria is the fact that there is, broadly speaking, better agreement or consensus on elements constituting performance as opposed to those for efficiency.

The concept of performance is a multifaceted and encompassing one. Harrison et al (1974, p. 4) state that performance refers to a combination of economic consequences that includes economic efficiency in the use of resources in marketing activities, effectiveness in market coordination to promote price stability, fulfillment of customer quality preferences, and competitive flexibility and willingness of market participants to innovate and progress. Cave, in Lentican (1983, p. 15), gives a less specific definition. He defines it as "the appraisal of how much the economic results of an industry's market behavior deviates from the best possible contribution it could make to achieve socioeconomic goals." Several performance measures have emerged because of the broad definition of socioeconomic goals (Lentican, 1983, p. 15). Farrell (1977, p. 2), listed six market performance dimensions separating economic from social dimensions. Economic dimensions included efficiency, equity, progressiveness, and responsiveness while social measures included environmental concern and product safety. Marion and Handy in Lentican (1983, p. 15), provided no less than fifteen measures. They included sales promotion costs, characteristics of the product, and the responsiveness of firms to societal needs as well as traditional measures. Kriesberg (1974, p. 21), and others have also produced lists of performance measures. However, the list of performance measures given by Brandow in Jesse (1987, p. 222), seems more encompassing. Brandow's list is quite general including, explicitly or

implicitly, performance measures suggested by most others (Jesse, 1987, p. 222). They are returns to factors of production, stability of prices, output and employment, fair conduct, price coordination, product characteristics, efficiency, progressiveness, selling costs and externalities.

Attempts to limit the dimensions of economic performance have been made. It appears this is to avoid the ambiguities associated with value judgments embedded within varying definitions of a system that is socioeconomically sound. It has been an attempt to largely disregard the social aspect and its accompanying prescriptive welfare economics issues.[1] Resolving questions about what the performance of a particular marketing function should be or should cost, or by whom they should be done, involves socioeconomic value judgments which may be outside the competency of marketing technicians (Kriesberg, 1974, p. 21). Perhaps the confusion that welfare economics brings into performance evaluation was best verbalized by Stigler, in Milon (1987, p. 69), who described this branch of economics as ". . . that branch of economic theory in which one economist achieves fame by demonstrating a flaw in the price system and a second economist achieves equal fame by discovering a flaw in this demonstration."

Bressler and King in Lentican (1983, p. 15), suggested two efficiency measures - pricing and productive efficiency. Others, for example, Purcell in Lopez (1989, p. 17), prefer to categorize

them as price efficiency and technical efficiency. The rest of the discussion centers on these two measures of performance.

Price efficiency

Price efficiency, also referred to as economic efficiency (Kriesberg, 1974, p. 22 and Jesse, 1987, p. 219), and allocative efficiency (Jesse, 1987, p. 219), is concerned with whether the price of marketing services reasonably reflects the costs of resources used in providing them. Pricing efficiency also means that the marketing process is responsive to consumer wants, e.g., more resources will go to provide more marketing services, if consumers are willing to pay the price that firms charge for the services (Kriesberg, 1974, p. 22). He cautions however, that the usefulness of the price efficiency measure depends on four conditions: 1) Consumers be provided with viable alternatives from which to choose from the market place; 2) Prices of alternatives adequately reflect the costs of providing them; 3) Business firms be relatively free to enter or leave the given market activity; and 4) There is competition among those in the market place.

If markets operate efficiently, prices of a given food will be related over space and time, and among forms. Prices should only differ between geographic areas of a country by transportation costs from one point to another. The price of a storable commodity at any one time should not exceed the price in the previous period of time by more than the cost of storage. Similarly, the price of the processed product should only exceed

the price of the unprocessed equivalent by the price of processing. Kriesberg concludes by saying that prices that are out of line, that is, they do not efficiently reflect the marketing activities, are clues to functional deficiencies, to the degree of monopoly, or to undue economic power existing somewhere within the marketing system.

Technical efficiency

This is also referred to as operational efficiency or productive efficiency. A system may operate efficiently by economic criteria, but if it is not conducive to cost-reducing technological change it may contribute little to economic development. In contrast to price efficiency, technical efficiency focuses on moving the goods through the market channels at least cost. Technical efficiency is achieved when goods and services are provided at minimum average cost, that is, when the least cost combination of marketing activities is used (Lopez, 1989, p. 17). Knowledge from diverse disciplines such as engineering, food technology, business management and economics, is directed at increasing the efficiency of food marketing systems (Kriesberg, 1974, p. 23). It is because of this that a direct relationship exists between technological advancement and the operational efficiency of marketing systems. Firms use several measures to improve the technical efficiency of their business. Some of these measures may be labor-saving, hence Kriesberg (1974, p. 23) states that caution must be exercised in developing countries where large unemployment exists, that

firms do not introduce technological changes which reduce their costs at the expense of adding to unemployment and hence to greater social costs.

Physical loss of commodities as they move through the channels of distribution from producers to the ultimate consumer is another aspect of technical efficiency (Kriesberg, 1974, p. 23). He adds that losses owing to poor handling methods and storage facilities reflect operational inefficiencies.[2]

2.3 Implications for This Study

Marketing performance studies must thoroughly address the aspects of technical and economic efficiencies.

For the former, detailed information as regards volumes of bananas moving from Thyolo to consumption areas in the cities and towns would have to be collected. In the process, all forms of losses as well as their respective causes would have to be noted. Also, resources used at every stage in such a chain of activities would have to be accurately noted. At the end of the day, all this would be required to see whether the marketing system is operating at a least-cost-combination point or is it incurring unnecessary costs.

Economic efficiency evaluation would also require carefully assembled information. In the case of the present study, this would require meticulous recording of all resources invested in the entire process of moving bananas from Thyolo to consumers through the various channels as well as through the numerous

markets within these channels. Coupled with this, an extensive recording of prices both across markets, regions and seasons would be required.

Given the time and resource constraint, a complete performance evaluation was beyond the scope of this study. While useful information will certainly be made available from this study, it was mainly meant to be used as a training tool in survey research. The resources available could not have supported the requirements for a detailed performance exercise as outlined above. Nonetheless, an effort has been made to pinpoint the aspects of the marketing system that may signify problems in performance. Detailed studies are hereby called for, so that proper performance evaluations could be carried out.

ENDNOTES

[1]Welfare economics can be contrasted with positive or descriptive economics, which is concerned with understanding the functions of economic systems. However, it is not prescriptive in the sense of recommending what these values should be. Welfare economics can be contrasted with positive or descriptive economics, which is concerned with understanding the functions of economic systems.

[2]Kriesberg also suggests that losses due to theft or bribery should probably be considered as part of economic inefficiency.

CHAPTER III

RESEARCH METHODOLOGY

The research was conducted in summer of 1989, and ran from late June to mid August. An effort was made to interview, to some degree, all the major players in the banana marketing system. The main emphasis was placed on interviewing producers which took the greater part of the study period. In all, 81 farmers were interviewed as were 42 retailers in the markets of Limbe, Blantyre and Ndirande, the former two, being the major markets to banana producers in Thyolo. Also, brief and informal conversations were conducted with a small number both truckers and people operating only as wholesalers. However, additional information on activities of both wholesalers and retailers was obtained from some farmers who were also involved in retailing or acted as middlemen or both.

3.1 The Sampling Process

The total number of farm families growing bananas in the area is 12767. The author recognizes that the sample drawn out of this population (81) was rather small. However, limitations in resources involved in this study could not allow for interviews involving a larger number of farmers. The most critical constraint was time. Initially, a target of 100 farmers

was arbitrarily set. However, by the time the survey had to be terminated only 81 farmers had been contacted.

The farmer sample was chosen using a stratified random sampling method. The six sections that constitute the Thyolo South EPA were used as the strata. Specifically, in each strata the list of farmers growing bananas was used as the sampling frame. This was obtained from the Development Officer, the head of extension services in the EPA. The farmers on this list were already numbered and these were the same numbers used to identify any one farmer in the selection process. Using a table of random numbers, a farmer with a corresponding number to the one picked on the tables, was selected as part of the sample. The number of chosen farmers from each of the six strata depended on the total number of farm families in each of the sections. Thus, Thekerani section which had the largest number of banana growers contributed the largest number of farmers to the sample. It was hoped that this sample would constitute a good representation of farmers and their experiences. Another issue considered in the sample was that of gender. The ratio of females to the total number of farmers was noted and an effort made to obtain a proper representation in the sample. For instance, if in a particular strata, sampled farmers included no females or the proportion of females in the sample was less than that for the whole population in the area, an additional number of females was added to the list. This was done by listing on a separate piece of paper all the unsampled female farmers and then again go through the same

table of random numbers and pick the corresponding female farmers to join the sample. To meet unforeseen problems, the sample drawn was greater than the 100 farmers expected to be interviewed. Upon consultation with the local extension officials some farmers were dropped from the list mainly due to inaccessibility. These were farmers whose villages were located in areas where a car could not reach or where the team found them to be too far to walk.[1] In cases where this resulted in reducing the sample size below the one computed for that particular strata, the whole process would be repeated until the required number was reached.

As stated already, the second part of the study involved interviews with retailers. These were 42 in total and were also randomly chosen and interviewed for a period of one week. A larger proportion of these came from the market of Limbe which had a larger number of banana vendors at the time. The selection method for the random sample here, was less formal than that for farmers. It was planned that every other retailer would be interviewed. However, this depended on willingness to be interviewed as some declined to do so. Hence the selection method was less orderly, though still random. A similar method was used for the wholesalers.[2] Only three truckers were interviewed as most were away from home, mostly at the various urban markets.

3.2 Questionnaire Administration

Pretesting of a survey questionnaire is of very vital importance. It gives a chance to discover some content as well

as structural problems that can be corrected before embarking on a full-scale survey. Due to shortage of time though, this was not done in the present study. Instead, after the in-country adviser had reviewed the questionnaire, the author went through each of the questions together with the enumerators to make sure they had understood what each question was looking for. It was hoped that this would also eliminate differences in answers from some questions, resulting from differences in comprehension inherent in humans.

Separate questionnaires for retailers and producers consisting of both structured and unstructured questions were administered in the surveys (see Appendix). Major issues sought from farmers included reasons why a particular channel (or channels) was preferred, the details of the transaction arrangements and problems faced in the whole marketing process. Retailers were asked to give details of the source of their bananas (whether they were from their own fields or purchased from wholesalers), transportation means, pricing procedures as well as overall problems encountered. As for the middlemen and truckers, only guidelines designed to solicit information on the most pressing issues were used.

Three enumerators, a high school (secondary school) graduate and two students from the College of Agriculture of the University of Malawi were hired for the work. In each of the six sections of the EPA, close cooperation with the local extension agents was sought. To this effect, the names of all sampled

farmers were given to the extension people well in advance of the interview so that farmers could be made aware of the interviews as well as the day when the researcher would be in any one village. Inevitably, it so happened that on some occasions a farmer would be unavailable for the interview due to various reasons.[3] In such cases replacements were sought either in the same village or in one nearby. On the day of the interviews, an extension agent would introduce the group to the farmer and then the author would make a few remarks before the commencement of the interview. This sequence was repeated until all the six sections of the EPA were covered.

3.3 Daily Retail Prices

Prices, especially relative prices, play a very important role to both producers and consumers, whether fixed by authorities or determined by the forces of demand and supply. Prices send signals to market participants and these signals play an important role in the overall allocation of resources in the system. Irregularities in prices may be clues to some underlying inefficiencies within the system. It is important therefore, that market analysis undertakings involve some documentation of prices.

Due to the fact that responses of market players to prices are not mechanical and also due to the inherent volatility in prices in the agricultural industry, particularly where perishable products are concerned, documentation of prices must

be done over several production seasons if they are to be meaningful. Daily prices should simultaneously be noted for a particular product in more than one market place. Also, more than one product could be dealt with in such an exercise. This would allow not only for intraproduct price evaluations across markets but also interproduct price evaluations both within the same market or in different markets.

In the present study, retail prices for bananas were collected only in one of the markets of Blantyre City- Ndirande. Separate price quotations were recorded for large, medium and small bananas for the period August 24 to October 31, 1989. Time constraint would not allow the exercise to be done for any longer period. However it was hoped that this time frame would allow an analysis of such issues as variation and intergrade price disparities.

ENDNOTES

[1]While the team did a considerable amount of walking all the same, places that would have required prolonged time of walking were left out at the onset.

[2]These mainly buy from the farmers who go there in trucks.

[3]The reasons for the unavailability included involvement of a farmer in occasions like funerals. Sometimes it was due to sheer communication problem to the effect that on two or so occasions, farmers expected us on one day and we came on another.

CHAPTER IV

MARKETING CHARACTERISTICS

4.1 Basic Characteristics of the Farmers in the Sample

Table 1 shows the distribution of the sample farmers according to gender, age, marital status, education attained and whether or not the farmer had any off-farm employment.

Fifty-six percent of the respondents were male farmers and the rest were female, though not necessarily household heads. The majority of the farmers (85 percent) were married.

Nineteen percent of the farmers had no idea as to when they were born. Of those who knew their ages, 33 percent were between the ages of 20 and 39, and a similar proportion were between the ages of 40 and 59. Fifteen percent were over 60 years of age.

Fourteen percent of the farmers were illiterate.[1] Most of those who had some education (73 percent), did not complete primary education. Only 12 percent completed primary classes.

The majority of the farmers (90 percent) were not involved in any off-farm employment. Those who did were involved in such activities as piece work (Ganyu),[2] or self employment activities such as beer brewing, basket weaving and carpentry.

Table 1. Distribution of the Sample among the Basic Characteristics

CHARACTERISTIC		NUMBER OF FARMERS	TOTAL
OFF-FARM EMPLOYMENT	Yes	8(10%)	
	No	73(90%)	81(100%)
GENDER	Male	45(56%)	
	Female	36(44%)	81(100%)
MARITAL STATUS	Married	69(85%)	
	Single	12(15%)	81(100%)
EDUCATION	None	11(14%)	
	Some Primary	59(73%)	
	Primary Complete	10(12%)	
	Some Secondary	1(1%)	81(100%)
AGE GROUP	20-39	27(33%)	
	40-59	27(33%)	
	60 +	12(15%)	
	Age unknown	15(19%)	81(100%)

4.2 Crops Grown and the Importance of Bananas

The importance of bananas to the people of Thyolo South EPA has already been emphasized in this text. In a separate survey in Thekerani, Shalla (1986, p. 8) found that 94 percent of the farmers grew bananas. All of them grew cassava and pigeon peas as well (Table 2). Results from this study substantiate this.

Table 3 shows that 83 percent of all farmers interviewed said that bananas were their most important crop with the rest having cassava or maize as the most important of their crops. Though land holdings were generally small (ranging from 0.4 to 4.0 hectares), the importance of the crop can also be seen from Table 3 which shows that over 50% of all the farmers reported cultivating bananas on over half of their total land holdings and no farmer had less than 25 percent of his or her land devoted to bananas. Several factors may account for this. However, the most notable is that the area seems to be unsuitable for many crops including the staple crop, maize. Other suitable crops include cassava and pigeon peas which are used as food but which probably do not offer as much income as bananas do. Eighty four percent of the farmers regarded bananas as their most important crop with the majority of the rest putting it second. A chi-square test showed that the relationship between rating of bananas among crops grown and the proportion of total land under bananas, was not significant at 5% level. It was hypothesized that farmers

Table 2. Distribution of Growers by Crop Grown and Sex of Household Head in Thekerani Rural Growth Center, 1986

Crop	Distribution of Households By Sex of Household Head		
	Male headed	Female headed	Total
	Percentages		
Maize	76	80	78
Cassava	100	100	100
Groundnuts	4	4	4
Bananas	96	92	94
Beans	6	6	6
Sweet potatoes	8	8	8
Sugarcane	-	2	1
Pigeonpeas	100	100	100

Source: Socioeconomic Characteristics of Smallholder Farmers around Thekerani Rural Growth Center in Thyolo District, Bunda College, 1988.

Table 3. Proportion of Total Land Devoted to Banana Production and its Rating among Other Crops Grown

RATING OF BANANAS AMONG CROPS GROWN	PROPORTION OF LAND UNDER BANANAS (%)				
	<25	25-50	51-75	76-100	
	Number of farmers[a]				TOTAL
Most important crop	0(0%)	26(35%)	22(30%)	14(19)	62(84%)
Second most important	0(0%)	8(11%)	2(3%)	1(1%)	11(15%)
Third most important	0(0%)	1(1%)	0(0%)	0(0%)	1(1%)
TOTAL	0(0%)	35(47%)	24(33%)	15(20%)	74(100%

(P>0.05)

[a]Numbers of farmers add to 74 instead of 81 because some farmers only answered one of the questions concerned, or did not answer any at all.

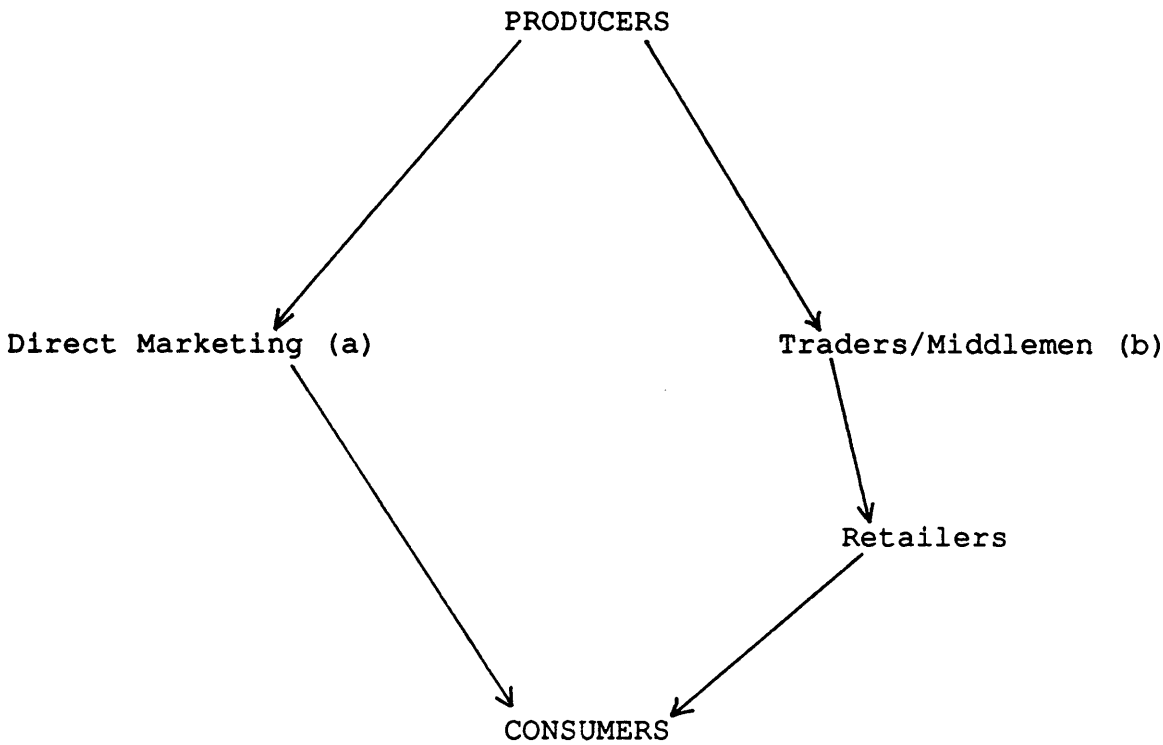
who regard bananas as their most important crop would have a greater proportion of their land planted to bananas.

The major varieties of bananas grown are, in descending order, Kabuthu, Sukali, Kholobowa and one or two less common ones. Kabuthu is by far the most commonly grown variety. Heavy bearing/production and early maturing were among the production attributes cited by farmers. Farmers also said that this variety was popular among consumers.

4.3 Marketing Practices

In this section, the marketing structure of bananas in Blantyre ADD is discussed. The system can broadly be termed dualistic because farmers operate dual systems of distribution (see Fig. 4). They sell directly to consumers, and also work through middlemen and wholesalers. Individual channels within this broad framework are presented and discussed.[3] Four distinct distribution channels were identified in this study. These were: 1) the village or road side markets, 2) local markets, 3) urban markets in the cities and towns, and 4) the middlemen. Fig. 5 and Table 4 show the participation of farmers in the above-named channels.

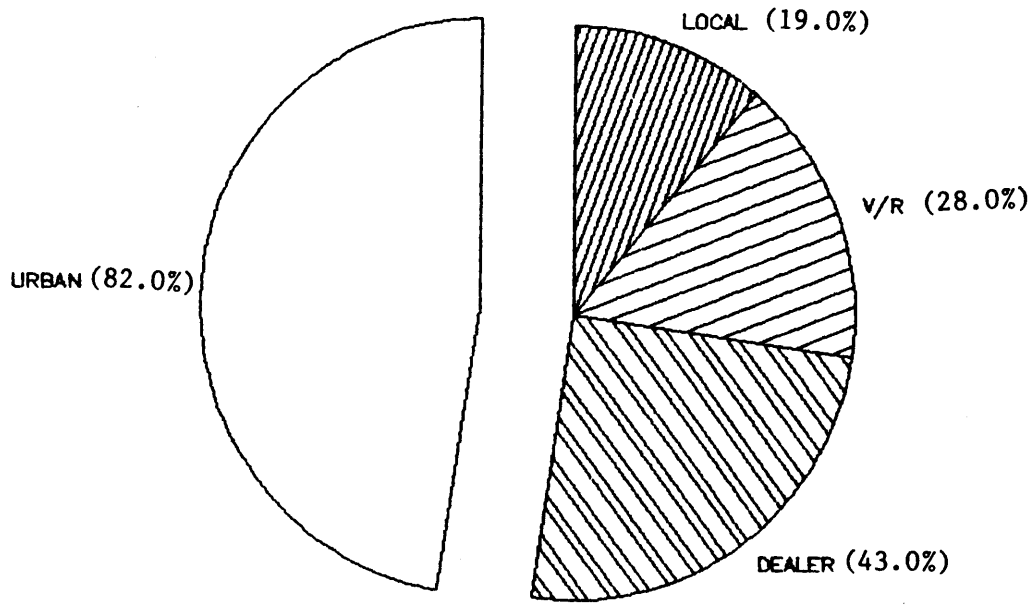
By far, the most important channel was that through the urban markets. Table 4 shows the proportions of bananas produced that went into each of the channels weighted by the amount of land involved in the channels. Both the figure and the table show how important the urban markets are to the farmers in the area.



(a) Farmers sell their bananas directly to consumers through:
- village or roadside markets
- local markets
- urban markets.

(b) This takes place either at the farms or in the urban markets.

Fig. 4. The Dual Marketing System for Bananas in Blantyre Agricultural Develpoment Division



Percentages add to more than 100% because farmers participated in more than one channel

Fig. 5. Farmers' Participation in the Distribution Channels of the Marketing System

Table 4. The Participation of Farmers in the Various Channels Weighted by Size of Land Involved

BANANA FIELD CATEGORY (HA)	MARKETING CHANNEL				
	VILLAGE/ ROADSIDE	LOCAL MARKET	URBAN MARKETS	TRADER/ DEALER	
	Hectares[a]				TOTAL
0-0.5	0.53(1.0%)	0.66(1.2%)	8.73(16.0%)	1.90(3.5%)	11.82(21.7%)
0.6-1.0	0.57(1.0%)	1.13(2.1%)	12.84(23.6%)	4.63(8.5%)	19.17(35.0%)
1.1-1.5	0.60(1.0%)	0.44(0.8%)	10.71(20.0%)	0.96(1.8%)	12.71(23.3%)
>1.5	0.83(1.5%)	0.00(0.0%)	6.67(12.2%)	3.33(6.1%)	10.83(20.0%)
TOTAL	2.53(4.6%)	2.23(4.0%)	38.95(71.4%)	10.82(20.0%)	53.54(100%)

(P>0.05)

[a]The numbers add up to the total hectarage of all the sample farmers

The size of banana field appears not to have had any influence on the choice of the marketing channel to be used.

4.3.1 Marketing Channels and Hypotheses

Sell directly to consumers in the village or roadsides

As has been shown already, this was second from the least utilized marketing channel in the production area. It accounted for only 28% of the total banana marketing activities. Farmers used this channel mainly for quick cash needs. For instance, if a farmer found that he/she had run out of necessary items such as salt or soap then they would take bananas to a nearby roadside so that passers by could buy them or the farmers sold them right in the village. Bananas bought this way are normally eaten as a snack. Price was typically determined through bargaining between the seller and the prospective buyer.

Anke Van Heur et al in Condon (1986, p. 185) provides a more detailed description of these types of markets. He notes that these markets: 1) are fewer in number than weekly markets; 2) contain limited buyers and sellers; 3) satisfy a particular demand at a specific time; 4) increase in number at harvest time, drought and famine; and 5) often are established along travel routes.

During this study, main problems identified in this marketing channel were, in order of importance, low patronage or few customers, the hassle involved in price setting (haggling) and the fact that during the time of plenty, prices would drop

drastically. All the three problems seem to stem from the fact that in the villages almost every person has bananas of his or her own. Thus it becomes hard to find people to buy the bananas. Also, in a situation like this the farmers' bargaining power is rather weak since the prospective buyer has a wide choice of people from whom he can buy bananas. Hence a farmer finds himself in a situation where he rarely sells his bananas at a price desirable to him. There was no indication that these problems varied with any of the basic characteristics of the sample.

Sell to local markets

This was the least patronized channel of all (used by only 19% of the farmers). It consists of specific places where buyers and sellers meet for the purpose of carrying out exchange functions in a wide range of commodities, both agricultural and non-agricultural. One must, therefore, view these markets as a vehicle for meeting the overall requirements of the people in the area and not as specialized outlets for any one individual commodity.

Bananas were transported to these markets in sacks and baskets often by headload by the individual producers. Like the village/roadside markets, a considerable amount of bargaining occurs here. On the whole, it appears that the farmers' bargaining position gets weaker and weaker as the day progresses and as worries of having to carry the bananas all the way back home start to creep in. Prices, therefore, may be considerably lower than earlier in the day.

These markets operate either on a daily basis or periodically on pre-specified days. The latter characterizes most of the local markets in the area. Several factors may account for the preponderance of periodic over daily markets. "In many areas, it is convenient for buyers and sellers alike, that markets be periodic, since a daily market would be badly attended and could offer only commonly desired goods and services" (Condon, 1986, p. 170). Also, the periodic market, by concentrating attendance on one or two special days, offers a wide range of goods and services (Condon, 1986, p. 170). More so in the case of bananas in the area, ". . . periodic markets are mostly located in regions of commodity surpluses, while the daily markets are located in the regions most characterized by deficits" (Condon 1986, p. 171). The inability of many rural residents to travel far and in short periods of time and on a continual basis is another important reason for the existence of periodic markets (Condon, 1986, p. 174). Distance to the markets ranged from those less than a kilometer away to some that were as far as 6 kilometers away. The distance is considerable when one considers the hilly terrain of the area.

Problems encountered by farmers in the local markets were price setting, transportation to and storage in the markets, and market space. Farmers indicated that the haggling over the price at which they had to sell their bananas was a bothersome procedure. This may be a manifestation of lack of bargaining

power on the part of farmers within the production area which is a surplus region.

The middlemen

This was the second most important channel in the marketing system, accounting for 43 percent of all the banana marketing activities by the producers. The main considerations for using the middlemen were cited as avoiding the problems associated with transporting bananas to the markets, especially those in the urban centers. Other reasons for the choice of this channel were need for quick cash and for sheer convenience since the traders bought right from the village or farm. Farmers said that they could quickly sell their bananas to traders and this left them with plenty of time to attend to other chores. The main issue here is that of the farmer ridding himself of the risk burden. As already stated, the production of perishable crops takes place in a very risky atmosphere. Hence, opportunities that would allow the farmer to pass on the risk to somebody would be readily seized. However, farmers also stated that they preferred to go to the urban markets where they made more money than selling to middlemen. The decision to go to the urban markets, seemed to depend on how well the farmer was prepared to bear the risks involved, which itself would depend on other domestic factors such as how desperate for money the farmer would be at that particular time.

In a year, the number of dealer visits to the farmers averaged to seven times. Table 5 shows a cross tabulation showing

Table 5. Relation Between Emphasis Placed on the Production of Bananas and Satisfaction with Dealer Visits

PROPORTION OF LAND UNDER BANANAS (%)	SATISFACTION WITH NUMBER OF DEALER VISITS		
	YES	NO	
	Number of farmers[a]		TOTAL
25-50	7(27%)	6(23%)	13(50%)
51-75	6(23%)	2(8%)	8(31%)
76-100	2(8%)	3(11%)	5(19%)
TOTAL	15(58%)	11(42%)	26(100%)

(P>0.05)

[a]The total of the numbers (26), is the number of farmers who are involved in the middlemen channel that also answered the question on proportion of total land under bananas.

the emphasis placed on banana production (shown from the proportion of total land devoted to banana production) and whether or not the number of times dealers visited a particular farmer was satisfactory. A Chi-square test, showed that this hypothesis was not statistically significant at five percent level. However, there appears to be a tendency that should be pointed out from the table.

There is some indication that those who put more emphasis on bananas (over 75 percent of total land) did not feel the visits were adequate since this is the only category whereby more farmers indicated dissatisfaction than those who thought the visits were enough. Table 6 examines the same issue but from the size of operation view point.

In all categories (except the smallest), there were more farmers satisfied with the visits than not. In the smaller size case, more were dissatisfied with the frequency at which dealers bought bananas from them. In the case of farmers with large cultivated areas, the farmers were evenly distributed. This may indicate that dealers prefer larger operators as opposed to smaller ones. These observations, however, were not statistically significant ($P>0.05$), probably because of the very small number of cases.

The urban markets

This was, by far, the most important channel to the farmers in the area, being used by 82 percent of the farmers interviewed. The urban centers involved were widely scattered across the

Table 6. Relationship Between Size of Operation and Satisfaction with Dealer Visits

SIZE OF BANANA FIELD (HA)	SATISFACTION WITH NUMBER OF DEALER VISITS		
	YES	NO	
	Number of farmers[a]		TOTAL
0-0.5	3(12%)	6(23%)	9(35%)
0.6-1.0	8(30%)	3(12%)	11(42%)
1.1-1.5	3(12%)	1(4%)	4(15%)
>1.5	1(4%)	1(4%)	2(8%)
TOTAL	15(58%)	11(42%)	26(100%)

(P>0.05)

[a]The values add to 26, the number of farmers involved in the middlemen channel who also provided information on size of their banana fields.

southern and the central regions of the country (see Fig. 6). The markets in the south were Nsanje, Monkey Bay, Mangochi, Chiradzulu, Balaka and the main markets of the city of Blantyre (including Limbe) and the town of Zomba. In the central region, the participating markets were Kasungu, Dedza and the main market of the city of Lilongwe.

Table 7 examines whether or not the choice of the urban market was based on the volume of bananas produced. A Chi-square test showed that there was a significant relationship between the two factors ($P<0.05$). It appears, therefore, that larger operators are more likely to be found in larger towns and cities while the smaller operators are more wide spread. While smaller producers go to the bigger markets in the cities, they also go to a number of other smaller markets; that is, smaller operators are more wide spread. In each category of size of operation, Blantyre/Limbe was the most sought after market. Two factors may account for this. First, the city is the largest in the country, and therefore, offers more opportunities for marketing. Second, the city is closest to the producing area and thus transportation costs as well as other risk factors associated with it are smaller.

The second most important urban market was that of Lilongwe for farmers with size of operation less than 1.5 hectares.[4]

A more interesting observation from the table seems to be the participation in urban markets other than those in the major cities. It appeared that larger operators preferred to go to the

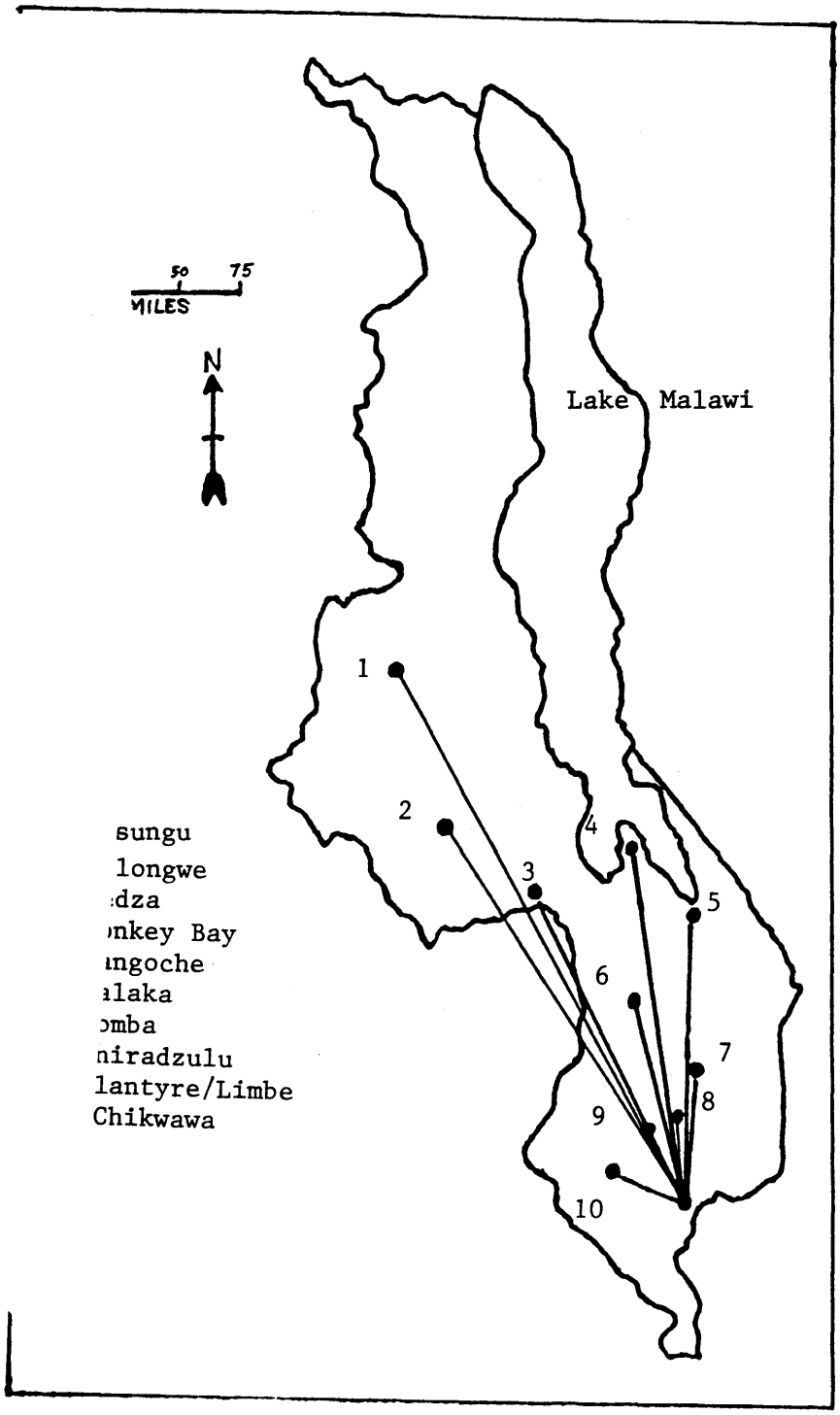


Fig. 6. The Extent of the Markets for the Bananas from Thyolo in Malawi

Table 7. The Relationship Between Size of Operation and the Extent of Search for Urban Markets

URBAN MARKET	SIZE OF OPERATION (HA)				
	0-0.5	0.6-1.0	1.1-1.5	>1.5	
	Number of farmers[a]				TOTAL
Blantyre/Limbe	15(21%)	8(11%)	8(11%)	2(3%)	33(46%)
Zomba	3(4%)	2(3%)	1(1%)	2(3%)	8(11%)
Lilongwe	8(11%)	7(10%)	5(7%)	1(1%)	21(29%)
Other	5(7%)	5(7%)	-	-	10(14%)
TOTAL	31(43%)	22(31%)	14(19%)	5(7%)	72(100%)

($P<0.05$)

[a]While only 66 of the farmers interviewed were involved in the urban market channel, the numbers add to 72 because farmers were involved in more than one urban market.

major urban centers of Blantyre, Lilongwe and Zomba as opposed to smaller ones like Chikwawa and Mangoche. No farmer with a banana field larger than 1.0 hectare sold his bananas in any urban market other than the three major ones mentioned above. There are more costs involved in the transportation of bananas to some of the smaller markets especially the one in Kasungu (See Fig. 6). Yet only smaller operators of less than 1.0 hectares, who presumably produced a lesser quantity of bananas, were willing to go that far. It is not clear as to why larger operators prefer to go to the larger urban centers. Conversely, what did the smaller operators find to be special with the markets in the smaller urban centers that would make them accept higher transportation charges as well as the risks involved? It is possible that with all the bigger farmers in the big urban markets, smaller farmers find it easier to sell their bananas in the smaller markets despite having to travel longer distances.

Whatever the destination, farmers cannot afford to individually hire a truck to transport only his or her bananas to the urban markets. Farmers in the area avoid this problem by hiring trucks collectively. Coordinating activities to this effect, is a person referred to as "the Order Man." This individual is responsible for identifying a trucker and obtaining from him details about charges and the time frame of transporting the farmers and their bananas to a pre-determined urban market. Farmers are then alerted of the arrangements, and then two or three days before departure, bananas are harvested. This gives

them a chance to pass the bananas through a smoking process.[5] The process takes about one day and farmers believe that without this, their bananas would never ripen or at least would do so poorly. After smoking, the bananas are heaped on the road side and covered with dry banana leaves.

Once the truck arrives, each farmer is allocated approximately one square meter of the truck's floor space. The height varies but is usually also about one meter. The truck floor is covered with dry banana leaves, bananas are packed, and then eventually covered with banana leaves.

The order man is responsible for the collection of the transport payments from the farmers. Some farmers are asked to pay the entire amount after the trip. However, the majority are divided between those who are asked to pay in full before the commencement of the trip and those who pay in part before and the rest after. It is not clear as to what determined who should belong to which category. However it seemed to have something to do with the credibility of one's past payment record. Someone whose likelihood of default is high may be asked to pay everything before any services are rendered to him.

Off-farm employment, especially if it is for supplemental income, may allow a particular farmer to more easily pay for truck hiring. Also, if he produces more, the farmer's earnings may be higher making the truck payment easier. These two hypotheses are tested using data in Tables 8 and 9. In both cases however, the relationships were not statistically significant.

Table 8. Hired Truck Payment Schedule and Whether or Not Farmer Had Off-farm Employment

TIME OF PAYMENT FOR HIRED TRUCK	OFF-FARM EMPLOYMENT		
	YES	NO	
	Number of farmers[a]		TOTAL
All amount before departure	4(6%)	27(41%)	31(47%)
Split before and after	1(2%)	30(45%)	31(47%)
All amount after the trip	0(0%)	4(6%)	4(6%)
TOTAL	5(8%)	61(92%)	66(100%)

(P>0.05)

[a]The numbers add to 66, the number of farmers involved in the urban market channel.

Table 9. Hired Truck Payment Schedule and Size of Operation

TIME OF PAYMENT FOR HIRED TRUCK	SIZE OF OPERATION (HA)				
	0-0.5	0.6-1.0	1.1-1.5	>1.5	
	Number of farmers[a]				TOTAL
All amount before departure	12(20.0%)	8(13.3%)	6(10.0%)	2(3.3%)	28(46.7%)
Split before and after	12(20.0%)	10(16.7%)	4(6.7%)	2(3.3%)	28(46.7%)
All amount after the trip	2(3.3%)	0(0.0%)	2(3.3%)	0(0.0%)	4(6.6%)
TOTAL	26(43.3%)	18(30.0%)	12(20.0%)	4(6.7%)	60(100%)

(P>0.05)

[a]The numbers add to 60 because 6 of the farmers who go to the urban markets did not provide information about the size of their banana fields.

While data in Table 8 do not support the hypothesis that larger farmers were more likely to be asked to pay the trucker in full before departure, two issues may be worth noting. First, almost all farmers who had off-farm employment were asked to pay in full before the commencement of the trip. Presumably, truckers were aware of the payment capabilities of these farmers and, therefore, demanded everything at the onset of the trip. Second, all farmers who were given a free ride until after the sales of their bananas had no off-farm employment.

Table 9 shows that the quantity a particular farmer produced had no influence on the payment schedule for the truck hiring services. Regardless of the size category of the banana fields, farmers were more or less evenly distributed between paying everything before the trip or splitting the payment. Also, those who paid everything after the trip were spread across a wide range of sizes of operation. It would appear, therefore, that a complex of socio-economic issues come into play in deciding who pays when.

Problems associated with urban marketing were quite diverse. The most common one was that of transportation to and storage at the markets. Transportation concerns included the following:

1. The road into the production area was not all-weather passable. During the rainy season the trucks (lorries) would at times get stuck in the mud. This resulted in severe losses due to overripening. Sometimes the

lorries would breakdown, resulting in spoilage of bananas.

2. Inadequacy of trucks or at least trucks whose owners were willing to operate in the area. This might have resulted from the problem of the road condition as stated above. It would appear, that those truckers that were willing to operate in the area, had to bear a considerable amount of risk.
3. " High" truck charges. Farmers were very concerned about this. A detailed trucking study is suggested to address the situation.

It appears that the road condition is at the center of the problems. Shalla (1986, p. 15) wrote the following about the M9 road which is the main road passing through the area:

> The M9 road needs to be improved.... The good road would attract lorry owners to operate in the area and thereby alleviate the transport problems farmers are facing.

Second to the transportation problem is that of market space which may be related to that of storage. Other issues raised included pricing procedures and market entry fees.

The storage problem concerned the open-air spaces allocated to the sellers. The main concern was that bananas would at times get rained upon during the rainy season leading to losses due to spoilage.

The price setting problem was common to all channels. Table 10 makes an-across-the channel view of the problem to see whether any one method of price setting was more associated with a

Table 10. Method of Price Setting in the Various Channels in the System

PRICE DETERMINATION	MARKETING CHANNEL				
	Village/ Roadside	Local Market	Urban Market	Dealer/ Trader	
	Number of farmers[a]				TOTAL
By seller	18(12%)	11(8%)	43(8%)	10(7%)	82(57%)
Bargaining	10(7%)	5(3%)	11(8%)	21(15%)	47(33%)
Both above[b]	-	-	8(5%)	3(2%)	11(8%)
Market authorities	-	-	4(3%)	-	4(3%)
TOTAL	28(19%)	16(11%)	66(46%)	34(24%)	144(100%)

($P<0.001$)

[a]Figures total more than 81 because farmers are involved in more than one channel.
[b]Some retailers said at times they set the price at which bananas were sold and at others bargaining took place.

particular channel. The table shows that a very significant relationship ($P<0.001$) exists between the channel used and method of price setting.

Sellers were largely responsible for setting prices. However, when a middleman was used there was more likelihood that price would be determined through bargaining. Another notable thing is that some urban markets set prices at which bananas would be sold. It is neither clear whether this was specific to a particular market nor what criteria were used to arrive at these prices.

4.3.2 Retailing in Blantyre City Markets

Although some farmers retailed their bananas in the urban markets, the majority of the retailers in the markets of Ndirande as well as the main markets of Blantyre and Limbe were people that had no banana fields. The major source of bananas for these people were wholesalers. This was the source for 48 percent of the retailers interviewed. Forty percent purchased the bananas from farmers while the rest were equally divided between those who sold bananas solely from their field and those who bought bananas from fellow farmers to supplement those of their own. On the whole, the task of finding one regular source was reported to be a difficult one.

Transportation to various markets was mainly done by hired cars, though a good number also used headloads.

Retail prices were largely set by the vendor, though a small number said sometimes bargaining was entertained. These prices varied mainly in response to the amount available in the markets at any one time. During times of gluts, prices would be lower than they would otherwise be. Fig. 7 shows the behavior of daily retail prices of bananas in Ndirande market.

A t-test shows that differences between the mean prices of all the three grades are highly significant ($P<0.001$). This means that the market has clearly defined grades for the bananas. The results of a Pearson correlation test among the movements of the grades were, however, mixed. Large and small grades showed the strongest positive relationship with a correlation coefficient of 0.57, while medium and small grades had a correlation coefficient of 0.41. Both these relationships were highly significant ($P<0.001$), showing that these associations can not be attributed to chance. There was no significant relationship between large and medium size bananas (Correlation coefficient = 0.006). It would appear from these results that if we observed movement, say in the price of large sized bananas, we would almost certainly expect to see similar movement in the price of small sized bananas. Thus, we would expect that if the price of one increased (decreased), that of the other would also increase (decrease). Why the large and small grades would have a strong positive association, and yet only the small grade would have a strong relationship with the medium grade, is not clear.

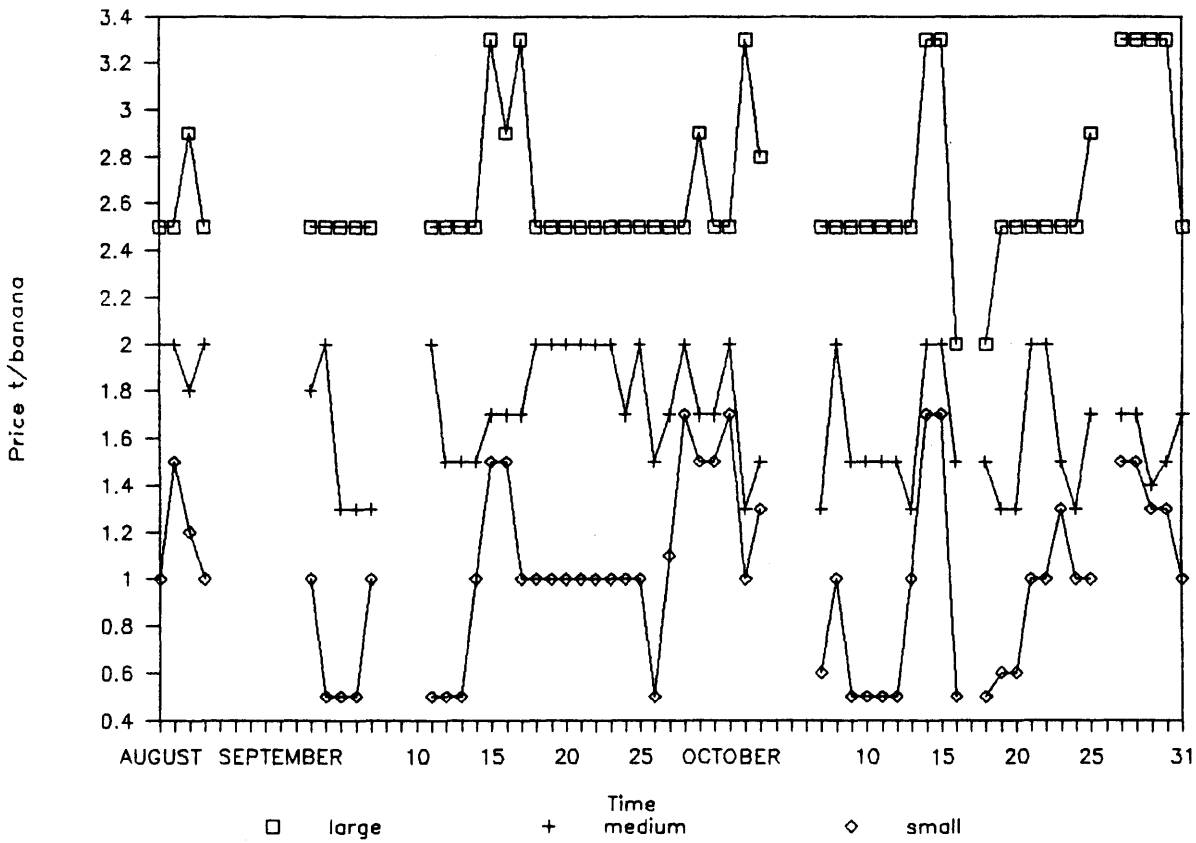


Fig. 7. Retail Price Behavior in Ndirande Market for Three Grades of Bananas

The prices showed no particular trend over the period. In all, the grades showed rather extended periods of constant prices punctuated with sudden drops or rises. Such changes were more common with the small size. This was reflected in the variances which were 0.11, 0.07 and 0.14 for large, medium and small grades, respectively.

4.4 System Performance Evaluation

The complexity of performance evaluation of a marketing system, has already been noted. The enormity of the problems faced in such an exercise can best be verbalized by quoting Farrell (1977, p. 3) who stated that:

> The food sector is becoming an increasingly complex vertical and horizontal array of firms, workers, institutions and market rules. Input supplies, processors and distributors are becoming more diversified and frequently operate across many product lines, commodities and markets. This makes it more difficult to measure and evaluate performance - financial and operating data are usually available only for the total operations of a firm or its major divisions, while questions of performance often focus on more narrowly defined industries, product lines, or commodities. Thus we face the dilemma of needing more detailed and costly data to properly evaluate food industry performance without significantly increasing the already heavy data reporting burden faced by most firms.

While this study did not come up with all the required information for a detailed performance exercise, this section makes an effort to draw attention to the major issues that may be symptomatic of faulty performance in the system. This has been done separately for the two main categories of efficiency - economic and technical efficiency.

Technical inefficiency

The most notable sign of technical inefficiency in the system is the physical losses that are occurring during transportation of bananas from the production area to the urban markets. These losses were not quantified in the present study. However, they were reported to be quite substantial during the rainy season. Certainly, this does not auger well with the main focus of technical efficiency which is to reduce cost of moving bananas from Thyolo to the various market outlets in the country. Another item that surely does not help in reducing the cost of getting bananas to consumers is the handling and storage methods used.

For the former, Shaffer et al (1987, p. 10) calls it 'an externality problem' whereby they observe that bananas are frequently walked on in handling, causing substantial deterioration. They continue to say that because the damage doesn't show up before the product is sold, the cost is not usually imposed on the person causing the damage. Shaffer et al conclude by saying that this adds costs beyond deterioration because it creates an incentive to deal only with those who are known, limiting specialization and the extent of the market. In the present study, it was not uncommon to see farmers/dealers load the bananas in the trucks, cover them, and then to use them as seats en route to the cities. This is the very externality problem being described above. The bottomline is that this adds costs to transactions involved in getting bananas to the

consumers and thus lowering the operating efficiency in the system.

Storage came to be another frequently reported problem, especially by vendors in the urban markets. They reported that the inadequacy of storage spaces made them resort to storing bananas on open-air spaces which resulted in some of their bananas rotting if it rained. This adds to the physical losses of bananas in the system.

Economic inefficiency

Issues of relevance here were: 1) price setting by authorities, especially in some of the urban markets, 2) inconsistent measures, 3) erratic supplies in some markets, and 4) theft.

An efficient banana marketing system in Blantyre A.D.D. would mean, as far as prices are concerned, that prices of bananas in Blantyre would differ from those in Kasungu or Lilongwe only by the cost of transportation to these places. This would mean that prices are related over space. Relationships of prices over time and form may presently not be of much relevance as no prolonged storage of bananas is practiced and no processing takes place. As regards the differences in prices in different markets, this study is handicapped in that prices were collected in only one market. Also, it must be mentioned that in some instances market authorities fixed prices at which bananas had to be sold in those particular markets. While it is appreciated that the price in Blantyre has to be different from

that in Lilongwe, chances are that through the above method, the disparity in the two prices may not be attributed to the differences in transportation costs. The fact of the matter here is that since it is not solely the forces of demand and supply operating in the system, it may be impossible for the prices to be related over space. Certainly, this is an area that needs more information since, on the one hand, not all farmers said that the prices at which they sold their bananas were spelt out by market authorities, and on the other, issues that are borne in mind when such prices are arrived at, are not known.

It was noted during the survey, that measures used by farmers especially, were not consistent. Heaps (piles of bananas) were used both when farmers took their bananas to the urban markets or when selling their bananas to the traders. Strange names are used to refer to varying sizes of these piles. The researcher and his team had not yet heard of the measures used there until during the survey. Such localized types of terminologies make marketing transactions difficult because the prospective buyer must be physically present for any purchasing arrangements to be done or people would tend to buy from specialized individuals whom they know and trust. Such individuals may be relatives or friends, or they could just be people they have known for a period long enough to cultivate trust in them. Whatever the case, such a state of affairs may be tantamount to barrier to entry into the market. Also this increases costs of carrying out transactions. The presence of

such features would definitely be signs of a system that is working below its potential efficiency level.

The daily prices of bananas recorded in Ndirande market showed that out of the 69 days in which the market was visited, 12 had no bananas at all. Put in a different way, for every six visits you make to this market, there is bound to be a day on which you won't find any bananas. If this were the case only for markets of the Ndirande calibre within the city, why couldn't bananas be moved from other markets? If this meant all the markets in the city had no bananas (which is unlikely) then that is even more serious since there are plenty of bananas in the production area. Whichever way one prefers to look at it, such observations are clues to the inefficiencies underlying somewhere within the system.

Mysterious disappearances of bananas (blamed on theft), were widely reported, especially among retailers in the urban markets. While this was not quantified, it is an important element of economic inefficiency within a market that must be pointed out.

ENDNOTES

[1]Illiterate refers to somebody who has never received any formal education.

[2]Ganyu is a local word for casual work on any task for money.

[3]According to Harrison (1974, p. 94), a distribution channel consists of a set of institutions that handle a product or group of products from production to consumption.

[4]This may, more than anything else, be a consequence of the generally small number of farmers with banana fields greater than 1.5 hectares.

[5]Here bananas are packed into a hole about 3 meters by 3 meters by 3 meters with a small tunnel leading to the outside where fire is set to a small heap of fuelwood arranged in a fashion that would produce as much smoke as possible. All farmers passed their bananas through this process regardless of the marketing channel.

CHAPTER V

SUMMARY AND SUGGESTIONS

5.1 Summary of the Study

This study was multipurpose in nature. While it was primarily used as a training tool in survey research and scientific report-writing, it was hoped that in the process it could provide insight into the complex banana marketing system in Blantyre Agricultural Development Division. Specific objectives to this effect were to: 1) identify the organizational structure at the retail, wholesale and farm levels, 2) identify services that were rendered at the various stages in the system, 3) identify the prevailing price spreads, 4) identify factors affecting choice of marketing channel to be used, 5) shed light on the activities of the truckers, and 6) identify bottlenecks in the marketing system as well as suggest possible solutions.

For this purpose, a survey was conducted in the area in the summer of 1989, from late June to about mid-August. Farmers, retailers, traders and a small number of truckers were interviewed. Farmers formed the main part of the research work.

An arbitrary figure of 100 farmers was originally targeted to be interviewed. However, due to time constraint only 81 farmers were contacted. A stratified random sampling method was used to select the sample farmers. The area has six sections for

administrative purposes. These were used as strata in the sampling process. The selection of retailers and traders was also random but less orderly than that for farmers. While originally it was planned that every other retailer would be interviewed in the market, factors such as willingness to be interviewed as well as the total number of vendors present on any one day, made strict adherence to the plan impossible.

Farmers in the area sell their bananas both directly to consumers as well as through middlemen. The former takes place in three different ways: 1) farmers sell their bananas in their respective villages and on the roadsides, 2) they sell in the local markets, and 3) farmers hire trucks collectively and sell their bananas directly to consumers in the urban markets, notably those of Blantyre and Lilongwe cities. The sales via the middlemen takes place both on the farms and also in the urban markets, at least the Limbe market in the city of Blantyre. It appears that this market also serves as an assembly point by these traders.

The main problem in the whole chain of activities seems to be transportation, especially when it comes to taking the bananas from Thyolo to various urban markets. The condition of the outlet road as well as the insufficiency of the number of trucks seem to be at the core of the transportation problem. Heavy losses are sometimes incurred by farmers if a truck loaded with bananas gets stuck in the mud during the rainy season. Also, on the part of truckers, the condition of the road means a lot of risk taking,

as expensive repairs on their trucks become inevitable. This in itself, may be a barrier to entry into the market and thereby lessen effectiveness of the system.

Daily retail prices of bananas were recorded in one market for the period August 24th to October 31st 1989. Significant differences existed among the mean prices of the three grades. Strong positive correlations existed between large and small grades, and between small and medium, but not between medium and small grades of bananas. Also, it appeared that there was more stability (less variation) among prices for medium bananas as opposed to the other grades - large and small. This exercise also revealed an alarming number of days in which the market visited had no bananas at all.

While a detailed performance evaluation was not done due to inadequacy of data collected, indicators of faulty performance within the system were identified. These were: 1) physical losses, especially when bananas were taken to the urban markets, 2) price setting by market authorities, 3) erratic supplies in some markets, 4) inconsistent measures used, and 5) inconsistencies as regards tolls collected upon entry into the urban markets as well as elements of theft reported by retailers.

5.2 Towards Improved Banana Marketing in Blantyre Agricultural Development Division

The importance of an efficient marketing system in Malawi in general, and in particular, that for fruits and vegetables can not be overemphasized. Chapter 4 revealed the special importance

of improved banana marketing to the farmers in Thyolo South EPA. Also, that chapter pinpointed a number of bottlenecks existing within the marketing system. In the short run, these are seen as merely robbing the farmer of higher returns, and the consumer, of benefits of lower prices. In the long run, however, due to the intertwined nature of the relationship between marketing and production, the output on the farms declines or at best, stays the same. Alleviating marketing constraints is evidently one important key to increasing returns to rural residents and for lower consumer prices.

It is difficult to expect farmers and traders to either unilaterally take the initiative, or to have the means to effect perceived changes. Therefore, suggestions for improvement do and must cut across policy lines. These must however, not be taken as blueprints, but merely as suggestions in the light of the findings of the study. The remaining exposition in this section deals with the specific suggestions for improvement.

Transportation

Marketing almost always involves some form of transport, adding to the commodity the utility of place (Whetham, 1972, p. 4). The importance of a good and reliable transportation system, particularly with regards to perishable products, can probably best be shown by quoting from Condon (1986, p. 240) who stated that:

> The function of any transport system is to bridge the gap in terms of distance between producers and consumers. Its effectiveness, in the case of perishable products, has to be measured in terms of output, costs, reliability, quality preservation and market accessibility.

In this study, transport came up as an important problem facing banana producers in Thyolo. With the unreliability of the transport system, truck owners no doubt find it risky to operate in the area. Those who do, have to face a lot of risk. This state of affairs in any marketing system results in increased costs. Firstly, to cover risks, truckers may inflate their charges (adding some sort of a risk premium). Also, this may merely be to cover the increased running costs associated with driving on a rough road. Secondly, the losses incurred due to breakdowns also culminate in higher costs than would otherwise be the case. Whichever way one looks at it, the above factors result in relatively higher costs within a marketing system. It is important to point out that the risks involved and the resultant demand for a considerable amount of capital required for trucking in the area, can be considered as barrier to entry into the market. The expansion of the road networks is the most important factor in increasing the production and marketing of fruits and vegetables, as stated by Pentastico in Condon (1986, p. 240). An improvement of the road from Blantyre through Thyolo to Bangula would have a very positive impact on production as well as marketing of bananas in the area. There should be greater competition among truckers due to easier entry into the business. This should result in decreased fares, improved delivery time,

and overall lower costs in the system. Year-round easy accessibility should ensure constant flow of bananas to various markets in the consumption areas and should result in increased production. On the whole, this should be able to inject efficiency in the system.

A variant problem of the transport issue, is the fact that smallholder farmers by nature are cash handicapped. Farmers in Thyolo have to engage in the truck hiring exercise because they want to take their produce to areas where prices are higher. This requires that a farmer must have some cash to begin with. Since not all farmers may have this cash at hand, some form of credit assistance may be quite appropriate. This could be part and parcel of the already existing credit structure administered by the extension service machinery. The logistics of such an exercise are beyond the scope of this thesis. Suffice it to say that it is a plausible notion in the light of the study findings. Abbott (1970, p. 135), says that benefits from such credit facilities include sales in new markets and possible reductions in margins, with corresponding increases in production and consumption.

Urban markets

The main issues of concern here are provision of modest storage facilities as well as sheds where retailers in the market display their bananas. Presently, the retailers use open-air spaces and can hardly tell where bananas belonging to one person begin and where they end. This has bread a conducive atmosphere

for theft which was reported in the urban markets, especially Limbe. Provision of some form of structures designed to provide shed as well as make storage more secure would be very much in order. These would curb losses due to open-air storage and those due to theft, which would contribute towards improvement in technical and economic efficiencies of the system.

Another point worth noting, is that of irregularities as regards the collection of tolls from sellers entering the markets. The complaint was that sometimes receipts are not issued after having made payment. The problem is that such practices put in jeopardy, the much needed trust among different players in the marketing system. This may be an issue for the City Councils to take up.

Standardization of measures

It is important that banana sales transactions be carried out using standard measures. Standard weights and measures, and grades can reduce opportunistic behavior (Goetz and Weber, 1986, p. 11). Opportunistic behavior breeds mistrust which, as has already been pointed out, is counterproductive to the development of an efficient marketing system. The ingenuity of man the world over, can devise so many deceptions - a lower case rim, a somewhat higher bottom, a somewhat lighter or smaller product - that marketing improvement can hardly begin if there are no fixed measures and weights to serve as a basis for transactions (Abbott, 1970, p. 71). Such measures as cubic meters ought to be instituted, whereby multiples thereof or fractions of this

could be used. This way, a purchaser need not necessarily be physically present to know what constitutes a particular buy because this can be verified. This is an issue that extension Field Assistants can easily handle via the 'block meetings'.[1]

Cooperative retry?

The sad reality about marketing and a smallholder farmer is that individually, due to the small nature of production, his influence over the marketing system is, if any, negligible. The obvious available alternative to marketing his produce as an individual, is for the farmer to come together with one or more other producers and for them to market their output collectively (Barker, 1981, p. 117). Abbott (1982, p. 290), said that the desire to set up a marketing cooperative is generally provoked by a feeling that existing marketing channels are not providing an adequate service or are charging too much for it. He also states that specialized production which is some distance from an adequate market would appear to offer special scope for cooperative transport and selling. The foregoing seems to strongly suggest that banana production in Thyolo South EPA offers a good opportunity for a successful marketing cooperative or at least some sort of group marketing.

A similar arrangement was tried in the area about a decade or so ago. This proved to be a failure as has been the case with a number of cooperatives elsewhere in developing countries (see Shaffer et al, 1987, p. 16-19). These authors point at a number of reasons for these failures including inappropriate operating

procedures, poor management, opportunistic behavior and lack of trust, inability to compete, and failure of members to recognize the potential benefits. A systematic post mortem of the collapse of the cooperative in the area is necessary. Meanwhile, it is important to bear in mind the potential benefits that would accrue to members in the event a cooperative were successfully instituted. According to Shaffer (1987, p. 18), the benefits include increased opportunities for specialization as well as economies of scale especially if the cooperative has open membership, and also opportunistic behavior is checked. Dissemination of market information should also become easier. All these should result in lower marketing costs among members. Abbott (1982, p. 290), says that by joining together to assemble, pack, store and sell produce, farmers may either obtain better prices directly or induce existing traders to give better prices under the pressure of new competition.

For the above benefits to be realized however, Shaffer et al (1987, p. 18), give a list of prerequisites as follows: 1) a cadre of marketing technicians to promote and organize the cooperatives and train the managers, 2) regulations to guard against opportunistic behavior by managers and boards of directors, and, 3) a special line of credit. The important thing is that a cooperative must be able to deliver the goods to the members otherwise it must fail. ". . . the fact that cooperatives and private firms are allowed to fail when they do not provide benefits to their patrons, which do not exceed their costs, is

part of the discipline required to achieve system performance (Shaffer et al, 1987, p. 19).

The foregoing paragraphs have tried to impress upon the reader, of the potential benefits that can be realized from a coherent collaboration among smallholder farmers in their endeavor to market their produce. Whether it should be retried in Thyolo would depend on the results of work called for in the next and last section of the study.

5.3 Areas for Further Research Work

Since the study noted inadequacies of data in some respects, there are several areas in which further work is recommended. The present study had a good grasp of the activities that take place on the farm but failed to capture the details in other structures of the marketing system. This made meaningful and more detailed performance evaluation impossible.

Firstly, a detailed study solely on performance of trucking activity is called for. This study should be able to make a documentation of the transaction arrangements and characteristics between truckers and their clients. How do truckers decide which part of the area to service? Do they prefer certain areas, farmers or groups of farmers? If so, what are the underlying factors? How are truck charges arrived at? Is there any form of collusion among the truckers? What are the arrangements in cases where lorries happen to breakdown--does the farmer bear all the risk or only part of it? Volumes transported should also be

recorded as should the charges to various markets. Finally, truck running costs could also be collected as far as possible. These data would be very useful in carrying out an analysis of the trucking part of the system with a view to finding out sources of inefficiencies and then suggest remedial action.

Secondly, daily retail prices ought to be collected in the major urban markets. Other fruits and/or vegetables could also be included in such an exercise. This would allow for analyses of prices for different commodities within the same market as well as in different markets for the same commodity. Prices at the wholesale level should also be collected so as to allow for examination of price spreads from the farmer to the consumer. Such work should be done for at least two seasons. From this work, margins as well as their attributes would be computed. Policy makers would find such information very useful, especially in pinpointing areas in the marketing system where unnecessary costs are being incurred.

Thirdly, a separate case study for farmers, especially those who sell their bananas to the urban markets, should be done. The emphasis here should be on resources committed at every major process from production to marketing. Volumes each farmer usually transports to these markets and the losses, could also be recorded. Such information would be used to develop an input/output relationship of the system.

Fourthly, scanty details of why a cooperative type of structure failed a decade or so ago need to be pieced together.

We have already seen that a number of cooperative structures have failed to stand in many developing countries (see section 5.2). Did the "Thyolo Banana Producers and Transporters Cooperative" fall in the same trap? Can't we look back and learn from the mistakes that were made? An ad hoc study like the one being called for here would give such food for thought. What the author visions here is how the farmers' own initiative in organizing the truck hiring-groups could be made into a more coherent structure for the benefit of the farmers. It seems farmers have the willingness to work together for a common goal and this is a very important element towards the establishment of a successful cooperative. After all, it is the wish of the Malawi Government that "...wherever possible, the formation of marketing cooperatives should be encouraged."[2]

ENDNOTES

[1]The Field Assistant further divides his section into Blocks in which he meets with farmers on pre-determined days. These meetings are called 'Block Meetings'.

[2]Malawi Government, Statement of Development Policies, 1987-1996.

REFERENCES

1. Abbott, J.C. Marketing of Fruits and Vegetables. 2nd ed. Rome: F.A.O., 1970.

2. Abbott, J.C. Agricultural Economics and Marketing in the Tropics. London: Longman, F.A.O., 1979.

3. Abbott, J.C. Market Improvements in the Developing World. Rome: F.A.O., 1986.

4. Abbott, J.C. "Consideration of Alternative Marketing Organization to Serve Small Tropical Farmers", Agricultural Administration, Vol. 9, 1982.

5. Arthur, H.B., J.P. Houck, and G.L. Beckford. Tropical Agribusiness Structures and Adjustments - Bananas. Division of Research, Graduate School of Business Administration, Harvard University-Boston, 1968.

6. Bauer, P.T. "State Control of Marketing in Developing Countries", in Agricultural Marketing for Developing Countries, ed. D. Izraeli, D.N. Izraeli, and F. Meissner. INCOMAS Proceedings Vol. 2, 1974.

7. Barker, J.W. Agricultural Marketing. New York: Oxford University Press, 1981.

8. Condon, M.S. Horticultural Diversification and Marketing: Guidelines for Improving Smallholder Agriculture in Nyanza Province, Kenya. M.S. Thesis, Cornell University, 1986.

9. Farrell, K.R. Market Performance in the Food Sector. United States Department of Agriculture, Economic Research Service, ERS-653, 1977.

10. Goetz, S. and M.T. Weber. Fundamentals of Price Analysis in Developing Countries' Food Systems: A Training manual to accompany the Computer Software Program MSTAT. Michigan State University International Development Papers. Working Paper No. 29, 1986.

11. Harrison, K., D. Henley, H. Riley, and J. Shaffer. Improving Food Marketing Systems in Developing Countries: Experiences from Latin America. Research Report No. 6. Latin American Studies Center, Michigan State University, 1974.

12. Izraeli, D., and F. Meissner. "Research Activities in Marketing Systems for Developing Countries", in Agricultural Marketing for Developing Countries., ed. D. Izraeli, D.N.Izraeli, and F. Meissner. INCOMAS Proceedings Vol. 2, 1974.

13. Jesse, E.V. "Economic Efficiency and Marketing Orders", in Economic Efficiency in Agricultural and Food Marketing, ed. R.L. Kilner and W.J. Armbruster. Iowa State University Press/Ames, 1987.

14. Kriesberg, M. "Marketing Efficiency in Developing Countries", in Marketing Systems for Developing Countries, ed. D. Izraeli, D.N. Izraeli, and F. Meissner. INCOMAS Proceedings Vol. 1, 1974.

15. Lentican, F.A. The Structure, Behavior and Performance of the Philippine Fruit and Vegetable Industry. Ph.D. Dissertation, Colorado State University, 1983.

16. Lopez, J.D. The Structural Characteristics and Performance of Market Channels used by Agricultural Producers in the San Luis Valley. M.S. Thesis, Colorado State University, 1989.

17. Malawi Government,"Statement of Development Policies 1987-1996."

18. Milon, J.W. "The Science and Art of Efficiency Analysis: The Role of Other Performance Criteria", in Economic Efficiency in Agricultural and Food Marketing, ed. R.L. Kilmer and W.J. Armbruster. Iowa State University Press/ Ames, 1987.

19. Palmer, C.M. "A study of Market Efficiency", in Bunda College Research Bulletin.

20. Shaffer, J.D., M. Weber, H. Riley, and J. Straatz. Influencing the Design of Marketing Systems to Promote Development in Third World Countries. Michigan State University, International Development Papers. Reprint No. 2, 1987.

21. Shalla, M.F. Socioeconomic Characteristics of Smallholder Farmers around Thekerani Rural Growth Center in Thyolo District. B.S. Project Report, University of Malawi, Bunda College of Agriculture, 1988.

22. Slater, C.C. "Marketing - A Catalyst for Development", in Marketing Systems for Developing Countries, ed. D. Izraeli, D.N. Izraeli, and F. Meissner. INCOMAS Proceedings Vol. 1, 1974.

23. Valles, J. The World Market for Bananas, 1964-1972. New York: Frederick A. Praeger, 1968.

24. Whetham, E.H. Agricultural Marketing in Africa. London: Oxford University Press, 1972.

APPENDIX

BANANA MARKETING PERFORMANCE IN BLANTYRE AGRICULTURAL DEVELOPMENT DIVISION, MALAWI

QUESTIONNAIRE

VILLAGE : _____

SECTION : _____

FARMER'S NAME : _____

ENUMERATOR NAME : _____

DATE : _____

PRODUCER

HOUSEHOLD CHARACTERISTICS

1. Gender of respondent

   1 - Male
   2 - Female

2. Age of respondent

   1 - Under 20 years
   2 - 20 - 29
   3 - 30 - 39
   4 - 40 - 49
   5 - 50 - 59
   6 - 60 plus
   7 - Dont know

3. Marital Status of respondent

   1 - Married
   2 - Single

4. Education Level of respondent

   0 - No education
   1 - Some primary
   2 - Primary completed
   3 - Some secondary
   4 - Secondary completed

5. Off farm employment/other income generating activities of respondent.

   1 - None
   2 - Carpenter
   3 - Brick layer
   4 - Charcoal making
   5 - Ganyu
   6 - Other (Specify)_____

HOLDING SIZE AND CROPPING PATTERN

6. What is your total land area?

1 - < 1 acre
2 - < 2 acres
3 - < 3 "
4 - < 4 "
5 - < 5 "
6 - < 6 "
7 - < 7 "
8 - < 8 "
9 - < 9 "
10 - <10 "
11 - >11 "

7. What crops do you grow?

1 - Maize
2 - Beans
3 - Bananas
4 - Cassava
5 - Sweet Potatoes
6 - Other (specify)_____

Our main interest is in bananas and we would appreciate if you could answer some questions on this crop.

8. How do you rate bananas among your crops in terms of importance?

1 - Most important
2 - Second most important
3 - Third most important

9. Why do you grow bananas?

1 - Cash
2 - Food
3 - Both but mostly cash
4 - Both but mostly for food
5 - Other (Specify)_____

10. What varieties of bananas do you grow? Why?

1 - Kabuthu

Reasons (Circle all that apply)
1. Easy to grow
2. Less vulnerable to transportation losses
3. Most liked by consumers
4. Other (Specify)_____

2 - Sukali
1. Easy to grow
2. Less vulnerable to transportation losses
3. Most liked by consumers
4. Other (Specify)_____

3 - Kholobowa
1. Easy to grow
2. Less vulnerable to transportation losses
3. Most liked by consumers
4. Other (Specify)_____

4 - Other (Specify)_____
1. Easy to grow
2. Less vulnerable to transportation losses
3. Most liked by consumers
4. Other (Specify)_____

11. What is the size of your banana field?_____Acres.

12. What proportion of your total cultivated land is it _____%

13. Over the past 5 years, have the figures in # 11 and 12 changed?

1 - YES 2 - NO
If yes, provide the following information.

Size

1. Smaller
2. Larger

Proportion

1. Smaller
2. Larger

Reasons for this change _____

_____

_____

Now we would like to specifically discuss with you how you get your bananas sold since this is our main interest in the bananas that you grow.

14. What proportion of your bananas are marketed according to following methods?

1) _____ Direct to consumers in the village/road side.

2) _____ In the local market

3) _____ To the markets of Blantyre, Lilongwe and Zomba.

4) _____ To traders/dealers

5) _____ Other (Specify)_____

TOTAL 100%

15. What are the reasons for the choice of the method(s) above?

1. Volume produced militates against the use of other methods

2. Ease of transportation

3. Profitability etc.

DIRECT TO CONSUMERS IN VILLAGE/ROADSIDE

16. Which of the following quality factors do you consider when selecting bananas for this market? (Number them in order of descending importance with #1 being for the most important)

_____ Size
_____ Variety
_____ Stage of ripening
_____ Other (Specify) _____

17. Which size among the following do you look for when selecting bananas for this market and why?

1. Large size
2. Medium size
3. Small size
4. Combination of above sizes

Reason(s) for the above choice_____

_____

_____

_____

18. What do you do with the bananas of the other sizes?

1. Home consumption Size_____

2. Sell to other markets (Please specify below)

Size	Market
_____	_____
_____	_____

3. Other (Specify) _____

19. What variety do you grow for this market and what characteristics make this variety appealing to this market? List them in order of importance.

1. Kabuthu
   ___ Taste
   ___ Ease of storage and/or transportation
   ___ Other (Specify) _____

2. Sukali
   ___ Taste
   ___ Ease of storage and/or transportation
   ___ Other (Specify)_____

3. Kholobowa
   ___ Taste
   ___ Ease of storage and/or transportation
   ___ Other (Specify)_____

4. Other (Specify)_____
   ___ Taste
   ___ Ease of storage and/or transportation
   ___ Other (Specify)_____

20. What stage of ripening is most preferred for this market. Why?

1. Raw _____ Reason

2. Just ripe _____ Reason

3. Very ripe _____ Reason

21. Does the price at which you sell your bananas to people who come into the village or buy from the roadside vary from day to day?

1 - YES
Why would the price be higher one day and lower on another?

_____

_____

2 - NO

22. Over the past 6 months, what are the highest and lowest prices you have charged for your bananas?

	Highest	Lowest
Kwacha per banana	_____	_____
Kwacha per finger	_____	_____

(Approximate number of bananas in a finger) _____

Month when highest prices prevail _____

Month when lowest prices prevail _____

23. Who sets these prices?

1. Producer
2. Arrived at through buyer/seller bargaining
3. Other (Specify)_____

24. How satisfied are you with the prices at which you sell your bananas?

1. Very satisfied
2. Just satisfied
3. Unsatisfied
4. Very unsatisfied

25. Which of the following problems do you encounter when selling your bananas from the roadside or from your village?

1. Setting prices is difficult
2. We get very few customers
3. Other (specify)_____

Explain_____

_____

_____

26. What suggestions for improvement would you recommend for method of marketing your bananas?

_____

_____

_____

_____

TO THE LOCAL MARKET

27. How far from the village is the market? _____ Miles

28. How often a week does the market open? _____

29. How do you transport your bananas to the market? What are the packing arrangements (baskets, sacks etc) Transportation means

    1. Headload
       1 - sacks
       2 - baskets
       3 - other (specify)_____

    2. Bicycle
       1 - sacks
       2 - baskets
       3 - other (specify)_____

    3. Own oxcart
       1 - sacks
       2 - baskets
       3 - other (specify)_____

30. If hired transport, what are the charges?

    1. Hired oxcart _____ /Mile/load.

    2. Hired car _____/Mile/load.

31. How much losses do you encounter in transportation?

    1. Less than 25%
    2. Between 25 - 50
    3. Over 50%

32. How much losses do you encounter in storage at the market?

    1. Less than 25%
    2. Between 25 - 50
    3. Over 50%

33. Which of the following quality factors do you look for when selecting bananas for this market? (If more than 1, number them in order of descending importance ie #1 for the most important)

_____ Size
_____ Variety
_____ Stage of ripening
_____ Other (Specify) _____

34. What size among the following do you look for when selecting bananas for this market and why?

1. Large size
2. Medium size
3. Combination of above zises.

Reason(s) for above choice _____

_____

_____

35. What do you do with bananas of the other sizes?

1. Home consumption Size _____

2. Sell them to another market (specify below)

Size	Market
_____	_____
_____	_____

3. Other (Specify) _____

36. Which variety do you grow for this market?

1. Kabuthu
   1. Taste
   2. Ease of storage
   3. Other (Specify) _____

2. Sukali
   1. Taste
   2. Ease of storage
   3. Other (specify)_____

3. Kholobowa
   1. Taste
   2. Ease of storage
   3. Other (specify)_____

4. Other (Specify) _____
   1. Taste
   2. Ease of storage
   3. Other (specify) _____

37. What stage of ripening is preferred for this market, why?

1. Raw _____Reason

2. Just ripe _____ Reason

3. Very ripe _____ Reason

Reason for above choice _____

_____

_____

38. Does the price at which you sell your bananas in the local market vary from day to day?

1. YES

Why would the prices vary from day to day? Explain

_____

_____

_____

2. NO

39. Over the past 6 months, what is the highest price you have charged for your bananas at the local market?

_____ Kwacha per banana

_____ Kwacha per finger (Approx. # of bananas per finger _____)

_____ Kwacha per bunch (Approx. # of bananas per bunch _____)

40. What is the lowest price you have charged over the same period of time?

_____ Kwacha per banana

_____ Kwacha per finger (Approx. # of bananas per finger _____)

_____ Kwacha per bunch (Approx. # of bananas per bunch _____)

Month when prices lowest_____

Month when prices highest_____

41. Who sets these prices?

1. The producer
2. Bargaining between buyer/seller
3. Other (specify)_____

42. How satisfied are you with the prices at which you sell your bananas?

1. Very satisfied.
2. Just satisfied.
3. Dissatisfied.
4. Very dissatisfied.

Explain _____

_____

_____

43. Which of the following problems do you encounter when selling your bananas to the local market?

1. Setting prices is difficult
2. Storage and transportation
3. Market space
4. Other (Specify) _____

Explain _____

_____

_____

44. What % of your bananas are lost during transportation to the local market?

    1. Less than 25%
    2. Between 25 - 50%
    3. Over 50%

45. What % of your bananas are lost during storage at the local market?

    1. Less than 25%
    2. Between 25 - 50%
    3. Over 50%

46. What suggestions for improvement would you recommend in this method of marketing your bananas?

_____

_____

_____

_____

_____

_____

SELL TO URBAN CENTERS IN BLANTYRE, LILONGWE, ZOMBA AND OTHERS

47. Which cities do you sell your bananas to? List them beginning with the one you consider as the most important to you?

1. _____

2. _____

3. _____

4. _____

48. Which of the following quality factors do you look for when selecting bananas for this market? If more than one, number them in order of descending importance ie #1 for the most important factor.

_____ Size
_____ Variety
_____ Stage of ripening
_____ Other (specify) _____

49. What size among the following do you look for when selecting bananas for this market and why?

1. Large size
2. Medium size
3. Small size

Reason for the above choice _____

_____

_____

50. What do you do with the bananas of the other sizes?

1. Home consumption Size _____

2. Sell to other market (please specify below)

Size	Market
_____	_____
_____	_____

3. Other (Specify)_____

51. What variety do you grow for this market and what characteristic make this variety appealing to this market? List them in order of descending importance.

1. Kabuthu
   1. Taste
   2. Ease of transportation and storage
   3. Other (specify) _____

2. Sukali
   1. Taste
   2. Ease of transportation and storage
   3. Other (specify) _____

3. Kholobowa
   1. Taste
   2. Ease of transportation and storage
   3. Other (specify) _____

4. Other (Specify) _____
   1. Taste
   2. Ease of transportation and storage
   3. Other (specify) _____

52. What stage of ripening is preferred for this market and Why?

1. Raw _____
2. Just ripe _____
3. Very ripe _____

Reason for above choice _____

_____

_____

53. Does the price at which you sell your bananas in the markets of Blantyre, Lilongwe, Zomba vary from day to day?

1. YES

What causes this variation? _____

_____

_____

2. NO

54. Over the past 6 months what are the highest and lowest prices you have charged for your bananas in the markets in the cities?

	Highest	Lowest
Kwacha per banana	_____	_____
Kwacha per finger	_____	_____
Kwacha per bunch	_____	_____

(Apporoximate # of bananas per finger _____

(Approximate # of bananas per bunch _____

Month when price highest _____

Month when price lowest _____

55. Who sets these prices?

1. The producer
2. Arrived at through bargaining between the producer and the buyer.
3. Other (specify) _____

56. How satisfied are you with the prices at which you sell your bananas in the cities?

1. Very satisfied
2. Just satisfied
3. Dissatisfied
4. Very dissatisfied

Explain _____

_____

57. How do you transport your bananas to the markets?

1. Own car/truck
2. Hired truck/car
3. Other (specify) _____

58. If you use a hired truck, do you hire individually or with other farmers?

1. Individually _____ Charges

2. With other farmers _____ Charges

59. How do you find the people from whom to hire trucks?

Is it an easy or difficult task? Explain _____

_____

60. Having identified the person with a truck, how do you organise yourselves in groups? (Blocks, Villages, etc)

_____

_____

_____

61. How do you finally pack your bananas to make them ready for transportation to the urban centres? (Sacks, Baskets, etc)

_____

_____

62. When do you pay for the truck?

1. Before transporting the bananas
2. After selling the bananas

Reason _____

_____

63. How many bunches do you harvest and transport during each trip? _____

64. What % of your bananas is lost during transportation to the cities?

1. Less than 5%
2. Between 6 - 20%
3. Over 20%

65. Once in the city, how do you store your bananas?

_____

_____

66. What % of your bananas is lost during storage?

1. Less than 5%
2. Between 6 - 20%
3. Over 20%

67. Which of the following problems do you encounter when selling your bananas in the markets in the cities?

1. Setting prices is difficult
2. Storage and transportation
3. Market space
4. Other (Specify) _____

68. What suggestions for improvement would you recommend in this method of marketing your bananas?

_____

_____

_____

_____

SELL TO MIDDLEMEN

69. Which of the following quality factors do you look for when selecting bananas for this market (number them in order of descending importance ie #1 for the most important)

_____ Size
_____ Variety
_____ Stage of ripening
_____ Storage (Specify)_____

70. What size among the following do you look for when selecting bananas for this market, why?

1. Large size
2. Medium size
3. Small size

Reason(s) for above choice_____

_____

_____

71. What do you do with the bananas of the other sizes?

1. Home consumption Size _____

2. Sell to other markets (Please specify below)

Size	Market
_____	_____
_____	_____

3. Other (Specify) _____

72. Which variety do you grow for this market and what characteristics make this variety appealing to this market?

1. Kabuthu
   1. Taste
   2. Ease of transportation
   3. Other (Specify) _____

2. Sukali
   1. Taste
   2. Ease of transportation
   3. Other (Specify) _____

3. Kholobowa
   1. Taste
   2. Ease of transportation
   3. Other (Specify) _____

4. Other (Specify) _____
   1. Taste
   2. Ease of transportation
   3. Other (Specify) _____

73. What stage of ripening is preferred for this market and why?

1. Raw _____ Reason

2. Just ripe _____ Reason

3. Very ripe _____ Reason

Reason for the above choice _____

_____

74. Does the price at which you sell your bananas to the middle men vary from time to time?

1. YES
What factors cause these variations?

_____

_____

2. NO

75. Over the past 6 months, what are the highest and the lowest prices you have charged when selling your bananas to the middlemen?

Kwacha per finger _____ Highest _____ Lowest
(Approx. # of bananas per finger _____)

Kwacha per bunch _____ Highest _____Lowest
(Approx. # of bananas pe bunch _____)

76. Who sets these prices?

1. The producer
2. Arrived at through bargaining
3. Other (Specify) _____

77. How satisfied are you with the prices at which you sell your bananas to the middlemen?

1. Very satisfied
2. Just satisfied
3. Dissatisfied
4. Very dissatisfied

78. How many times in a year do these middlemen purchase bananas from you? _____

Is this rate acceptable to you?

1. YES

2. NO
   1. Prefer less
   2. Prefer more

79. Which of the following problems do you encounter when selling your bananas to the middlemen?

1. Setting prices is difficult
2. Storage and transportation
3. Other (Specify) _____

80. What suggestions for improvement would you recommend in this method of selling your bananas?

THIS SECTION IS FOR ALL PRODUCERS REGARDLESS OF MARKETING CHANNEL USED

81. Do you smoke your bananas?

1. YES (Answer the rest of the questions in this section)
2. NO (End of the producer session)

82. How long does it take to smoke a pitful of bananas? _____

83. How many persons attend to a pitful of bananas from loading into the time when they are ready for sell? _____

84. Do you buy the fuelwood that you use to smoke the bananas?

1. YES
   What is the price of the fuelwood? _____
   How much is needed for one pit? _____

2. NO

MIDDLEMEN (TRADERS)

85. How do you find the banana growers from whom to buy your bananas?

1. Through somebody working for you and resident in the area
2. Personal visits into the area
3. Other (Specify) _____

86. How often a year do you go out there to buy bananas?

87. Which of the following quality factors do you look for in purchasing your bananas?

1. Size
2. Stage of ripening
3. Variety
4. Other (Specify) _____

88. What size do you look for when purchasing your bananas?

1. Large size
2. Medium size
3. Small size

Reason for the above choice _____

_____

_____

89. Which variety do you look for when purchasing your bananas?

1. Kabuthu
2. Sukali
3. Kholobowa
4. Other (Specify) _____

Reason for the above choice _____

_____

90. Over the past 6 months, what are the highest and lowest prices you have paid for the bananas you purchase?

Kwacha each _____ highest _____ lowest
Kwacha per finger _____ highest _____ lowest
(Approximate number of bananas per finger _____)
Kwacha per bunch _____ highest _____ lowest
(Approximate number of bananas per bunch _____)

91. Who sets the prices?

1. The producer
2. Through bargaining
3. Other (Specify) _____

92. How do you rate the above prices?

1. Good
2. Satisfactory
3. Poor

93. Which type of people do you sell your bananas to?

1. Institutions
2. To retailers
3. To wholesalers
4. Directly to consumers in the markets
5. To retailers and wholesalers
6. To retailers and consumers
7. To retailers, consumers and wholesalers
8. Other (Specify) _____

94. Over the past 6 months, what are the highest and the lowest prices you have charged the buyers?

	Highest	Lowest
Kwacha per banana	_____	_____
Kwacha per finger	_____	_____
Kwacha per bunch	_____	_____

95. Who sets the above prices?

1. Seller
2. Buyer
3. Arrived at through bargaining
4. Other (Specify) _____

96. How do you rate these prices?

1. Good
2. Satisfactory
3. Poor

97. How do you transport your bananas?

1. Own car
2. Hired truck
3. Both
4. Other (Specify) _____

98. How much are your transportation losses?

1. Less than 5%
2. Between 6 - 15%
3. Over 20%

99. If hired truck, how much do you pay and how do you view the charges?

Charges _____

Rating of charges
1. Good
2. Satisfactory
3. Poor

100. Do you buy your bananas and immediately sell them or you sometimes need to store them?

1. YES
How do you store them?

2. NO

101. What are the losses between the time you purchase your bananas to the time you sell them?

1. Less than 5%
2. Between 6 - 20%
3. Over 20%

102. What in your view is the major cause of losses?

_____

_____

103. Which of the following problems do you face in your business?

1. Storage and transportation
2. Finding a reliable source of your bananas
3. Prices
4. Other (specify) _____

Explain _____

_____

_____

104. What suggestions for improvement would you recommend in your business?

_____

_____

RETAILERS

105. What is the source of the bananas that you sell?

1. Own farm
2. Purchase from people with banana farms
3. Purchase from wholesalers

106. How easy is it to find your suppliers?

1. Very difficult
2. Difficult
3. Easy

107. How do you transport the bananas from your source to the market?

1. Own car
2. Hired car
3. Other (specify) _____

108. How do you pack your bananas in readiness for transportation to the market? _____

_____

109. What materials are needed? _____

110. Do you purchase the above materials?

1. YES
   How much do they cost? _____

2. NO

111. What prices do you sell your bananas at?

_____ Kwacha each
_____ Kwacha per bunch
(Approx. # of bananas in a bunch _____)

112. How are the prices set?

1. Set by the seller
2. Arrived at through bargaining
3. Other (Specify) _____

113. Do prices at which you sell your bananas vary from one day to another?

1. YES
What factors cause these variations?

_____

_____

2. NO

114. How do you store your bananas? _____

_____

115. What materials are used? _____

_____

Do you buy these materials?

1. YES
How much do they cost? _____

2. NO

116. What % of your bananas are lost in storage?

1. Less than 5%
2. Between 6 - 20%
3. Over 20%

117. How easy is it to find customers for your bananas?

1. Easy
2. Very easy
3. Difficult
4. Very difficult

118. Which of the following problems do you encounter in your business?

1. Finding reliable source of the bananas
2. Storage and transportation
3. Other (Specify) _____

119. What suggestions for improvement would you recommend in your business?

_____

_____

_____

_____

_____