

SWAZILAND -  
COMMERCIAL AGRICULTURALL PRODUCTION  
AND MARKETING PROJECT

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FARMER ORGANIZATION AND TRAINING REPORT

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AND

THE UNITED STATES AGENCY FOR  
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SWAZILAND MISSION

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## INTRODUCTION SECTION I

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### A. Overview

This report is the result of a seven week consultancy with the objective of assisting the CAPM team develop strategies and plans for the implementation of the project for the next two year. To achieve the goal of creating farmer groups to organize and manage production and marketing activities will require a major effort in training farmers in business organization and management, accounting and record keeping, and marketing skills.

### B. Scope of Work

Specific tasks to be accomplished included:

1. Developing a training program for farmers, farmer organization members, boards of directors, and farmer organization staff and management.
2. Initiating of a framework for developing business plans for farmer organizations.
3. Assisting in the development of detailed plans for the establishment of packing sheds for the three farmer organizations targeted by the project, including physical facility requirements.
4. Conducting a market analysis study of both domestic and regional markets for potential outlets for vegetables resulting from the projects production activities. This consisted of analysis of historical data, as well as visits to local and regional markets. The end result will be to assist in the formulation of a comprehensive production and marketing program for the two year project extension period, along with other members of the CAPM team and the farmers themselves.

This report represents an attempt to accomplish as much as possible of the above scope of work while participating in the daily project activities to a great extent, including a number of meetings with farmer groups for the purpose of assessing their needs and level of development, and beginning informal training with these groups in the areas of marketing and farmer organization. Results of these meetings and discussions with the CAPM team has resulted in the final form of this report and it's emphasis on certain areas to the neglect of others.

The author would like to thank the members of the CAPM team, Doyle, Timothy, Jabulani, Mary, Gretchen, Mike, Dumile, Cornelius, Richard, Themba, Nonjabulo, Bob, Augustine, and Pumzile for their assistance and courtesy in making my stay in Swaziland an enjoyable and productive one. I feel I have made many new friends and sincerely look forward to returning to participate in the project on a long term basis.

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## FARMER ORGANIZATION TRAINING SECTION II

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### A. Background

Given the recent redesign of the Commercial Agricultural Production and Marketing (CAPM) Project, which has as one of its major end of project goals, the formation of farmer organizations in three or more regions of Swaziland, with the specific purpose of assembling, grading and packing their produce for market, there will be a shift in the technical assistance team to help in the creation and development of small farmer organizations. These farmer organizations have been identified as an essential way of getting farmers more involved in the marketing process.

The grouping of small farmers to achieve economies of scale, thus increasing their productivity, competitive advantage, and their chances of achieving economic viability has long been recognized in Swaziland. Since its independence 25 years ago, the Government of Swaziland, through the efforts of the Ministry of Agriculture and Cooperatives has been very supportive of the development of farmers cooperative organizations. The recognition that small farmer organizations have an important role to play in the establishment of a commercial agricultural base is a credit to the foresight of GOS agricultural policy.

Given the desire and need to establish commercial vegetable production and marketing systems in this country, the development of small farmer organizations along cooperative principles can play an important role. The development and history of cooperatives in Swaziland has been accompanied by difficulties, however. In his 1987 report, "A Review of Cooperative Development in Swaziland", Job A. Savage has presented an excellent review of the history of the cooperative movement in Swaziland and its successes and problems.

In his analysis, among the major reasons why cooperatives have failed to work as well as they could in Swaziland is the fact that members lack an understanding of cooperatives, how they operate, what can be expected of the organization, the member's role in the organization, and the management of a cooperative organization. He adds, that stemming from this the committee selection process and its function is poor and this leads to a domino effect. Since the committees do not understand their role in the management of the association, they engage incompetent staff or fail to properly delegate authority to them. This chain of events may lead to the outright failure of the organization or its inability to attain its intended goals.

Based on the above observations and those of others, as well as this author's personal experience in West Africa, the Caribbean and elsewhere, it is evident that a strong training component must be included in any attempt to develop small farmer production and marketing organizations for the purpose of commercial vegetable production and marketing. Given the

relatively short remaining life of the CAPM Project (two years) and the number of training issues which will need to be addressed all possible avenues of training will need to be explored. Within CAPM, the positions of Marketing and Farmer Organization Specialist, and Farmer Organization Advisor have been created in the redesigned project. These individuals, along with the rest of the CAPM Team, and training specialists and other personnel drawn from the GOS, the vegetable production and marketing industry and the development community will provide the general and specialized training required for the successful operation of small farmer vegetable production and marketing organizations.

## B. Training Program Development Process

In order to develop an effective training program, it will be necessary to identify, who the farmers organizations are, with which the project will work. Since these groups will likely be at various levels of preparedness, it will be imperative to determine their progress, and examine their goals and objectives. This assessment of training needs will enable the team to specifically tailor a training package and course of action appropriate to each group.

It is important that this assessment look at not only the farmers group as a whole, but also the needs of the subsets within each organization, ie. the general membership, the committee or board of directors, and the management and staff. Since this training effort will be based on need, it will be necessary to realize that some needs will be able to be planned and prioritized in advance and that others will evolve and need to be addressed rapidly. This flexibility will allow the training team to respond positively to the needs of each farmers organization.

Just as it is recognized as vital that farmer take the lead in organizing themselves into associations, they must be involved in organizing the training program. The training team will assist the participants in deciding what they want, what they value, what they perceive as being good, (with in the confines of the project) ie. setting goals and objectives. Then they (farmers and trainers) must decide on a strategy for achieving these goals, ie. determine a course of action.

In addition, it will be necessary to identify factors or constraints which prevent the achievement of goals and develop strategies for overcoming these constraints. Lastly, there should be a mechanism for evaluation or checking the progress towards goals to make sure the goals and objectives of the farmers organization is being achieved. Again, there must be the flexibility for the alteration of the course of action and even the goals if necessary. The training program should strive to educate and improve all the participants involved (trainers included).

## **C. Training Resource Personnel**

It is envisioned that the following groups will be involved in various aspects of the training program. Specific individuals within each group will be identified as the training component of the project crystallizes. Please note that the following list is tentative and by no means complete, the order is completely random and does not in any way suggest exclusion of any resource group which may have been overlooked or in anyway ranks the groups listed in importance.

### **1. Groups to be Trained**

- Farmer Organization Members
- Farmer Organization Committee
- Farmer Organization Management
- Farmer Organization Staff

### **2. Potential Trainers**

- CAPM Team
- STRIDE/AURORA Associates
- MOAC
- NAMBOARD
- Vegetable Production and Marketing Personnel
- Vegetable Buyers
- Short Term Consultants
- Others

## **D. Anticipated Training Needs for Small Farmer Production and Marketing Organizations**

### **1. General Topics**

- What is a cooperative, what is it not? Advantages and disadvantages of cooperative. What a cooperative can and can't do for members.
- Alternative forms of possible farmer organizations.
- Steps in setting up an organization. Pros and cons of various forms of business organization. Legal requirements of business under Swazi law.
- How cooperatives operate.
- Role of members within a cooperative, the board of directors role, the need for and the role of professional management, separation of duties.
- The notion of a cooperative as a business.
- Capitalization of farmer organizations.
- Importance of training.
- Concept of economy of scale and the role of cooperative organizations.

- Decision making - who, what, when, where, why, and how.
- How to hold a meeting - parliamentary procedure.
- Control systems
- Other topical identified through needs assessment.

## 2. Specific Topics

- Characteristics of the market and marketing, types of marketing arrangements, consignment agents vs speculators vs wholesale buyers.
- Record and bookkeeping
  - inventory
  - receival
  - farmer accounts
  - payments
  - cash control
  - disbursements
  - invoicing
  - sales
  - general ledger
  - profit and loss statement
- Labor management
- Post harvest handling
- Packaging
- Packaging house operation
- Equipment maintenance
- Sanitation
- Grading
- Choosing market outlets
  - volume of production
  - number of products
  - length of season
  - quality requirements
  - financial ability
  - market connections
  - market information
- Production issues
- Other areas identified through need assessment.

Note: Much of this section has been formulated by meeting with farmers singly and in groups and listening to their questions and comments. This form of needs assessment indicates a great need for training in many basic areas, ie., how the market operates and marketing concepts, what farmer organizations are and how they work, etc. Initial training in these basic areas will provide the ground work for the organizational capacity that is being developed and pave the way for other areas of more specialized technical training.

## E. General Topics Expanded

### 1. Farmer's Organizations and Cooperatives.

Farmers have always complained about having to buy high as a consumer and sell low as a producer. They have been concerned about their relative buying power, and have rallied continuously about the abuses, either real and imagined, of the marketing middleman. Mutual action by farmers to tackle large problems has long been a part of agricultural life. Traditionally, farmers have gotten together to assist each other with large tasks that required many acting together for a common purpose. Cooperative organization is one means for farmers to work together to solve mutual problems. Many agricultural cooperatives have been organized world wide, as well as in Swaziland, as a way to provide a variety of services, to help farmers sell their products, and to assist farmers purchase needed inputs. Cooperation has provided a way by which numerous, independent, small farm units can effectively compete in the business world made up of larger, more powerful units.

#### a. What is a Cooperative?

Several good definitions of a cooperative have been put forth over the years:

- Cooperatives are a means of enabling farmers to effectively compete.
- A legal, practical means by which a group of self-selected, selfish capitalists seek to improve their individual economic positions in a competitive society.
- A business voluntarily owned and controlled by its members and operated for them on a nonprofit or cost basis.

Two key aspects of these definitions are important in defining what is a cooperative. First, cooperatives are legal institutions that permit a group to compete within the framework of other types of business organization. Second, cooperatives are voluntary organizations that are set up to serve and benefit those who use them. Even though the laws that govern cooperatives may vary, there are three basic concepts that set cooperatives apart from other forms of business.

The first of these principles is the ownership and control of the business by those who are going to use its services. This means that the primary objective of the cooperative business is to do the assigned job at minimum cost and for the maximum satisfaction of its owner-members. Normally, control of the business is on the basis of one member, one vote regardless of the amount an individual might have invested in the business.

The second distinguishing characteristic is that the business operations should be conducted on a cost basis. Any return or profit above the cost of doing business is returned to the members on an equitable basis. This is usually based on the level of usage or patronage.

The third fundamental characteristic of a cooperative business is that the return on investment is limited. In a cooperative, the member owner invests in the organization so that it may provide desired services.

Like other businesses, cooperatives seek to undertake profitable ventures. The point of view which guides the business activities of a cooperative is that of its member-owners, who are also its customers and user.

## **b. Types of Cooperatives**

Cooperatives, like other businesses, are established to accomplish certain tasks. Agricultural cooperatives can be classified into four broad categories according to the purpose for which they are organized. Any particular cooperative may operate in more than one of these categories.

### **i. Marketing Cooperatives**

Marketing cooperatives are those through which farmers sell the products of their farms. A marketing cooperative may collect members' produce for sale, grade, package and perform various other marketing middleman functions. The objective of this type of cooperative is to achieve the greatest possible return for the farmer-members produce. Marketing cooperatives can operate in a variety of ways. Some act as commission agents for members' produce. Some may act as brokers in bargaining on behalf of members and do not physically handle product. Other marketing cooperatives may actually buy commodities from members for resale.

### **ii. Purchasing Cooperatives**

Purchasing cooperatives are those through which members buy needed agricultural supplies. These cooperatives purchase in bulk to reduce costs to members. The objective of this type of organization is to effect savings for the farmer on the things he purchases. Savings usually comes from lower prices or higher quality and better adapted supplies and equipment.

### **iii. Service Cooperatives**

Service cooperatives exist to provide members with improved services and/or with services that might otherwise be unavailable. Example of such services may include: equipment rental, credit, irrigation, insurance, and any number of other desired services.

### **iv. Processing Cooperatives**

Processing cooperatives are organized to engage in the packing or processing of farmers products. Processing cooperatives usually undertake the marketing of the finished product.

Many farmer cooperatives will often become involved in several of the aforementioned activities. A requirement for successful cooperative business activity is continuous large volume production. Cooperative organization is more difficult when it is based on scattered, low volume production by noncommercial, nonspecialized, small farm units.

c. What makes a Successful Cooperative?

A cooperative business association, if it is to be successful, must do at least one of the following things for its members:

- Increase the return from sales to members, and/or
- Reduce the price or provide a better quality of farm inputs purchased by members, and/or
- Provide new or improved services to members or grant more equitable treatment to members.

All the above add up to the cooperative contributing to the improvement of the economic well being of its members. Numerous studies have indicated that what ever benefits accrue to members from cooperation, the economic one is most important. For a cooperative to be successful, it is not enough that it do a job as well as is done by other agencies, to attract and hold members, it must do a better job than the middleman or business it seeks to replace. Success depends on service.

The basic reason for establishment of a cooperative enterprise must be the economic need for the association. There must be the possibility of doing a better job than is currently being done. This may take the form of better prices or improvements in the quality of inputs or services offered to members. Many cooperative organizations have been wished into existence only to fail when it was realized that there was no real service they could perform. A thorough and objective study of the facts should be done to establish actual need before a cooperative venture is organized.

Once a need for a cooperative has been established, it must be determined if the factors necessary for a successful business venture are present. These factors will be the same for a cooperative as for any other type of business organization:

- Is there an adequate volume of business available? Can it be maintained? The economies of large-scale operation is just as important to a cooperative as it is to a corporation or a private firm.
- Is reasonable and adequate financing available? To create and maintain an efficient business structure takes capital. To build less than an efficient business invites failure.
- Is good management available and affordable? Good quality management, demands a high price. A successful cooperative need as high a level of managerial skill as any other business.

- Is the membership ready for competitive trouble? Usually, at least in the formative stages of a cooperative venture competition is likely to get worse. New cooperatives can expect that the rest of the business community will unite against it during the initial period of it's existence.

A study of the reasons that cooperatives fail point to the importance of these factors. Some of the main reasons that cooperatives fail are:

- Lack of sufficient capital and credit,
- Inadequate membership support and business volume, and
- Weak or inefficient management.

#### d. Things a Cooperative Cannot Do.

There are things that even a successful cooperative cannot do for its members. A clear understanding by the members of the limitations is essential to avoid disappointment and discontent among members, and to ensure successful operation of the business. A cooperative must realize that it cannot set prices unless it has control of supply. This lack of control over prices applies to purchased inputs as well as the sale of members products. Therefore, cooperatives cannot control the production costs of members.

Cooperatives cannot eliminate the marketing functions performed by other middlemen. The cooperative may eliminate the some of the middlemen by assuming the marketing functions provided by these middlemen, but it must also assume the costs of performing these operations. Lastly, a cooperative organization cannot successfully, for any period of time, coerce or force its members against their will in to supporting or doing business with the association.

Cooperatives are subject to the same set of economic restrictions as any other form of business. The success of the cooperative association will depend on the business ability of the cooperative to operate efficiently and profitably and satisfy its member owners.

#### e. Financing the Cooperative Association.

Doing business costs money. Cooperatives require the same amount of capital as other businesses to perform similar functions. However due to the limitations on voting rights, share transferability, and returns paid on investment, cooperative businesses cannot easily sell shares to the public to raise funds. One method is to fore go cash refunds for members and retain the earnings of the association for capital investments. In general, cooperatives rely heavily on their members to supply needed financing.

#### f. Management of the Cooperative.

Three groups are involved in the management of a cooperative: the members, the board of directors, and the hired manager. The members exercise control by electing directors and

through their voluntary participation in the association. The directors have the responsibility of setting general operating policies and obtaining a manager to carry out policies and report the results to members. The manager is given the responsibility to operate the association's business. The manager puts into practice the policies established by the board.

The problem of getting good management is like that of any other business. To obtain good management, cooperatives must be willing to pay a salary competitive with other businesses. They must also be willing to finance adequate staff. Once a competent manager and staff are employed, they must be given the freedom and support necessary to accomplish the job given them, without excessive interference from the board of directors or members.

The problem of the board of directors is quite different. Corporations and other businesses are free to staff their boards with whatever talent they need and can find in the business and financial world. Cooperatives usually require that the board be selected from among the owner-members. Good farmers do not necessarily make good managers or directors. How to select good board members is a challenge to organizing a successful cooperative. Membership has an important role to play in this regard by voting wisely for the best, most capable person for the job, not the most popular or the best grower.

In a successful cooperative, each of the above groups will be aware of their role in the organization and give the others the freedom and support necessary to perform their job. In many large established cooperatives, the board and management often become more concerned with maintaining the status-quo, than with adapting to the changing needs of membership. Such a situation alienates the member-owners and sets the stage for failure. In successful cooperative organizations, the board and management are sensitive to the changing needs and desires of the membership.

#### g. Member Relations.

Member relations are important in a cooperative. Since membership and patronage of the business is voluntary, it is essential that good relationships be maintained between the members and their association. Association members should be encouraged to think of the cooperative business as "my co-op" and not just "the co-op". To accomplish this, cooperatives should be responsive to the needs and wants of its member-owners.

In many instances only a small majority of member owners take an active interest in the problems and management of their association. A good member is an informed member. Farmers who support cooperatives are those who know what cooperatives have done and what they can and cannot do. Successful cooperatives educate their members and keep them informed about, and participating in their cooperative.

In summary, cooperatives are a unique and important marketing tool for farmers. Cooperative associations are characterized by the fact that they are owned by and managed for the benefit of their owner-members. Co-ops provide farmers with

alternative marketing channels. They may also organize to provide farm supplies or other services needed by farmers. In order to be successful, agricultural cooperatives must increase members income, reduce members costs, and/or provide a service or better service than is offered by the commercial business sector.

In addition, cooperatives face the same set economic constraints as any other business in that they must operate profitably and provide services in the most efficient and cost effective fashion. Cooperatives face a number of unique challenges in the areas of member relations, control, financing and management. For cooperatives to meet the needs of membership, they must be open to change.

## 2. Alternative Business Organization Types

There are several forms a business organization may take under Swazi law, which for the most part is based on English common law. These each have important distinguishing characteristics and there are advantages and disadvantages to be weighed in considering each type. There are serious legal ramifications to consider as well. For example, a farmer's organization that is not properly registered may not be able to pursue legal action or bring suit to recover monies from accounts which fail to pay for produce delivered. Failure to make the Articles of Association and Memorandum of Agreement sufficiently broad may limit the businesses ability to enter into certain ventures in the future. Some organizational forms are restricted to non-profit activities only, while others may protect the business income from tax exposure. Most businesses operate under certain legal guidelines which require keeping proper accounting records, performing annual audits, and electing officers at an annual general meeting.

In short, there are several alternative business structures which a farmer's organization may wish to adopt. Failure to take proper legal steps in registering of a business, and overlooking all the possibilities involved may have serious, costly, and unpleasant legal consequences in the future. The success of the organization may be severely limited or even fatally crippled by the failure to observe certain preliminary steps. It is recommended that the project engage a competent business lawyer to cover the differences between the possible business structures and assist the organization in pursuing the necessary legal steps required to be properly registered under the laws of Swaziland.

A brief comparison of alternative business forms suited to are farmer's organization will be offered in the following section to indicate some of the differences, and the advantages and disadvantages of each.

### a. An Association.

This form of business is generally restricted to non-profit activities. It is suited to a farmer's organization that is set up to maintain and regulate an irrigation scheme for example. A annual statement of income and expenditure is the end result of accounting procedures. This form of organization is

relatively simple to set up. An association is probably not the most appropriate form of business frame work for a farmer's organization which wishes to engage in vegetable marketing as well as a wide range of ancillary activities on behalf of it's member - owners.

b. A Co-operative Society.

A co-operative society is an association of members is an association of members who pool their products or services for mutual benefit. The members of a co-operative society:

- Raise the required capital for the business by purchasing shares in the cooperative.
- Elect a committee or board of directors to oversee the business.
- Share profits in the form of dividends on the basis of equality. Dividends are typically calculated on the amount of business done with the society and not on the individual's capital investment.
- There is a limit to the number of shares an individual can buy.
- May allow non members to buy shares and use the businesses services, but only members may participate in elections, and share in dividends.
- All members are treated the same and none may reserve any goods or services.
- The business may retain some or all of the profits for reinvestment in the society.

Examples of co-operative societies include agricultural cooperatives and consumer cooperatives, such as building societies.

An agricultural cooperative is an association of farmers who may choose to: sell their pooled produce, seek new markets for their products, purchase implements and/or agricultural inputs for their members, and many other activities.

In Swaziland, there are several benefits to becoming an agricultural cooperative. These include: training opportunities for members, boards, and management conducted by MOAC and CODEC personnel, assistance with annual audits by MOAC, oversight by MOAC to ensure compliance with the association's own by-laws as well as Swazi law (this provides members with some level of protection against fraud and other dubious practices), and payment of no cooperate taxes on business income. The cooperative principle of one member - one vote is also important in ensuring that the business remains responsive to it's members.

Disadvantages include: limited ability to raise capital through the sale of shares, and a poor reputation among farmers and possibly other sectors, ie. banks. It should be noted that many of the charges laid against cooperative societies in Swaziland, are attributable to the failure of the members of the cooperative and not the cooperative itself. Many of these shortcomings might well occur in any business structure, if the member - owners fail to correctly assume their duties and responsibilities. Farmer training will be an important means of preventing these types of problems from arising in a cooperative or any other form of business structure.

It should also be noted that the Co-op section within the Ministry of Agriculture and Cooperatives, greeted the author with quite an initially hostile reception on a recent fact finding mission, due to the CAPM project's perceived failure to involve them in organizing farmer's groups. It is recommended that some thought be given to closing this rift, as it may jeopardize future harmonious relationships with MOAC. A similar concern has been voiced on the production side of the project, as well, regarding limited involvement with the MOAC field extension officers.

### c. A Company.

A company is an association of members called share holders, who contribute money to a common fund called share capital by buying units of ownership in the form of shares. Shareholders receive a share of the company's profit in the form of dividends. A company is a legal person in terms of the Companies Act. It has an independent life from that of it's share holders. A company owns all it's own assets, may conclude contracts, may sue or be sued, and aims to make a profit. The liability of a company is generally limited to it's assets and does not extend to the assets of the owners.

There are two types of companies: private and public companies. In a private company, the shares are not offered to the general public. The minimum number of shareholders is one and the maximum number is fifty. No prospectus is issued because the public is not invited to buy shares. The shares are not freely transferable, since the share holders must approve of any share of sales. The name of a private company ends in "Proprietary Limited", often abbreviated as (PTY) LTD. Annual financial statements must be prepared but they are not required to be published.

In a public company, the shares are offered to the general public. The minimum number of shareholders is seven. The maximum number of shareholders is limited by the number of shares issued. A prospectus is issued to advertise and offer shares to the public, and the shares are freely transferable. The name of a public company ends in "Limited". In a public company, annual financial statements must be prepared and published.

Advantages to becoming a public company include: broad flexibility in the range of activities the company becomes involved, general acceptance in the business community with out

many of the negative connotations (however valid) commonly attached to a cooperative, greater ease in raising capital through the sale of shares and other. One disadvantage might be the possible loss of control by the smaller members who may not be able to compete with larger members, since voting rights are normally based on the number of shares held.

### 3. Procedure for Starting a Public Company.

#### a. Create Company Documents

A number of like minded members of the public get together and decide on the amount of capital needed to finance the company, what the company name will be, what the functions of the company will be, and the kind and price of the shares, they will offer to the public. This is documented in the Memorandum of Association. How the company will operate is detailed in the Articles of Association. The company can only begin operations once these documents, amongst others have been registered with the Registrar of Companies and a certificate allowing the business to commence has been issued.

#### b. Company Shares

The public is then invited to buy shares. This invitation is issued via a Prospectus. Interested individuals may apply to purchase shares. Purchase of one or more shares makes one a shareholder and entitles the holder to a say in the running of the company. Shareholders are issued a share certificate representing the number of shares purchased.

#### c. Company General Meeting

After shares have been sold, an Annual General Meeting is called, so that the shareholders or members of the business can elect a number of people to run the company. These people are called Directors. They form the Board of Directors and have the responsibility for running the affairs of the company. The directors elect from among them a Chairman. The chairman, along with the rest of the board of directors, reports back to the members at the next annual general meeting regarding the affairs of the company. If the membership is satisfied with the progress of the company, they may decide to reelect the directors, if not they may choose new directors. By law a public company is required to keep proper accounting records. The directors are responsible for seeing that financial statements are prepared and presented at the annual general meeting.

#### d. Company Dividends

Shareholders are entitled to a share in the company's profits. At regular interval, this share or dividend is paid, it is usually declared in terms of a certain number of cents per share.

The procedure for setting up a cooperative and other forms of business entails similar steps and generally requires the registration of certain documents before the organization is

legally authorized to conduct business. Once again, consultation with a lawyer is advised in organizing and registering the business. In the case of a co-operative society, MOAC may be able to assist in the registration procedure.

## F. Specific Topics Expanded

### 1. Characteristics of the Market.

#### a. What is Marketing?

Marketing is many things to many people, to the house wife, it may mean a trip to the supermarket, to the farmer it may mean loading the bakkie with cabbages for a trip to the NAMBOARD market at Nokwane, or arguing with a vendor woman over the price to be paid for a load of tomatoes. Marketing maybe thought of as the connecting link or the bridge between the food producer and the consumer. It is not only a physical bridge, but an economic bridge designed to facilitate the movement and exchange of foodstuff from farm to fork.

The agricultural marketing system is composed of various products, alternative market flows (marketing channels), a number of firms (middlemen) and a variety of business activities (marketing functions). The marketing system plays two important roles: 1) the physical distribution, handling and transfer of produce from grower to consumer and 2) by adding value to the farm produce and helping the exchange between buyer and seller.

Agricultural marketing is both complicated and costly. Some farmers produce small amounts of a number of products, others produce larger amounts of a single commodity. Agricultural production tends to be seasonal and often at a great distance from the consumer. The produce must be collected, sorted and rapidly moved to market. These activities are the basis of the marketing system. There are few commodities that are more demanding of their marketing system than food products. This is especially true of vegetables.

Marketing is expensive. Two or more of every three dollars spent on food is spent on marketing. A 6,4 kg box of tomatoes which might sell for R 5,50 in Johannesburg contains only R 0.98 worth of tomatoes, the rest of cost is due to the box, grading and packing, transportation, labor, and various commissions and fees.

A good general definition of agricultural marketing might be: all the business activities involved in the movement of food products from the point of production until they are in the hands of the consumer. Marketing does not only take place beyond the farm gate, since a farmer should not produce anything without a market, the marketing process begins on the farm.

The relationship between farmers and marketing tends to be competitive and complimentary at the same time. Just as there would be no food without farmers little or no food would reach the buyer or consumer without the marketing system.

Marketing is productive, many people do not recognize the value of marketing. Farmers, in particular, often complain of the profits of middle men, yet there are many activities, transporting, grading and packing, storing, advancing and collecting payment etc. which must be done for a farm product to reach the consumer. A farmer, who has produced a tomato in Siphofoneni, has not produced a salad on the plate of a consumer in Durban. It is important to remember two facts when considering the marketing process:

- the overall ruler and coordinator of the marketing process is the consumer, and
- price must fully reflect all the costs involved in the production and marketing of a particular product or the system will breakdown.

#### b. Marketing Functions

A summary of marketing functions is useful to better understand agricultural marketing systems. Marketing can be broken down into a number of activities:

- Exchange functions - the transfer of goods.
  - Buying (assembling)
  - Selling
- Physical functions - handling and moving the commodity.
  - Storage
  - Transportation
  - Processing - grading and packing
- Facilitating functions
  - Standardization
  - Financing
  - Risk bearing
  - Market intelligence

There are three important characteristics of these marketing functions. One, is that the marketing functions affect not only the costs of marketing food but also the value of food products to consumers. This value added function is important to remember when discussing marketing.

Secondly, it is important to note while it may be possible to eliminate the middleman, it is very difficult to impossible to eliminate marketing functions. Eliminating the middleman involves a transfer of marketing functions and costs elsewhere. Farmers may choose to assume some of the marketing functions through the creation of a marketing association, eliminating certain middlemen, but they can not eliminate the task of performing the marketing functions and the cost involved.

Lastly, the various marketing functions may be performed by anyone anywhere with in the food system. The key questions are whether the necessary market functions are being performed to assure the movement of food from farmer to consumer and if they

are being performed most efficiently, in the least costly manner. Farmers may wish to assume additional marketing functions, but there is no guarantee that this will increase profits. Just as supermarket owners would probably make poor farmers, farmers may lack the skills and ability to manage a supermarket or marketing organization.

### c. Characteristics of the Agricultural Production Process.

Since agricultural marketing begins on the farm, it is useful to consider the nature of the raw product and its production. An understanding of the product and the production process will help explain the operation of the market and marketing systems.

Farming, in general, is and has been changing in many ways. There have been improvements in seeds, varieties, fertilizers, pesticides and other areas of crop production. This has resulted in an increase in production and an increase in the amount of product that has moved into commercial marketing channels. In addition, fewer people live on farms or in farming areas, so farmers are more dependent on the marketing system to supply ever larger quantities of their products to far away city populations.

Several observations about agricultural production are important in their influence on the marketing process.

- Much agricultural production is made up of small quantities of produce grown on a large number of individual farms,
- Farmers by nature tend to be more interested in production than marketing. Since the small farmer is usually manager/laborer, the demands of production absorb most of his time and energy,
- In many areas large specialized farms are developing.

The marketing system has had to deal with these realities, since the marketing system finds it easier to deal with a few larger suppliers, the small farmer must organize themselves to protect their interests. Certain characteristics of agricultural food products must also be considered to better understand the marketing process.

- The output of a farm is a raw material that usually requires further processing to make it acceptable to consumers. With vegetable crops, this may entail grading and packaging only or may involve further processing.
- Compared to other products farm products tend to be bulky and perishable. The bulky nature of agricultural products affects the marketing functions concerned with physical handling. Since bulky products take up a lot of space relative to their value, they tend to have high transportation and handling costs. Since most agricultural products, especially most vegetable crops are highly

perishable, they must be moved to the consumer rapidly or they lose their value. The perishability of these products makes it difficult for the farmer to withhold the product from the market, when it is ready it must move. Perishability also increases the need for speedy and specialized handling and increases the cost of marketing.

- The quality of farm products tends to vary from year to year, season to season, and farm to farm. This variation in quality makes demands on the marketing system, since one of its functions is standardization of products. But, despite the variation in quality, which occurs in farm products, once farm products are graded and prepared for market, they are relatively homogeneous. That is buyers have little reason to prefer one farmer's product over another. The result is that farmers receive about the same price for the same quality product.

Farmers have a good deal of control over the quality of their products. This is one area in which they can favorably influence their selling price.

#### d. The Characteristics of the Production Process.

Just as the nature of farm products are interesting to consider when analyzing the marketing of agricultural products, some of the characteristics of the production process also influence the agricultural marketing system.

- Better production practices increases farmers' productivity, but greater output may depresses prices.
- Farm production is subject to great annual variability. This variability is due to some uncontrollable factors, such as weather and disease and unpredictable response to price and other factors. This characteristic of agricultural production heightens the uncertainty of prices and increases the risks involved in marketing.
- Seasonal variability in production must also be considered. The effect of climate will affect the cost of production and the competitiveness of one area over another.
- Costs of production vary between farm operations and are affected by climate, technology, farm size and individual skill. The cost of production will vary widely between farms and areas. Studies show that larger farm operations are generally more efficient than small farms in both the economies of production and marketing. This implies that for small farmers to remain competitive, they must work together to achieve economies of scale.

The variability of production costs also means that at a given price for a commodity, there will be some farmers making money, some breaking even, and some farmers who are losing money.

- The role of the farm supply sector in the production process must also be considered. Most agricultural inputs, such as seeds, chemicals, fertilizers, and tools, come from off the farm. Some 60 - 80 % of the gross farm income is spent on the purchase of farm supplies. This adds another market for the farmer to operate in, since farm income can be increased by the efficient buying of supplies just as it can by the skillful selling of farm produce.

e. The "Farm Problem" and the "Farm Marketing Problem".

The "farm problem" is usually linked with unstable and generally low farm prices and incomes. A related set of problems might be called the "farm marketing problem". There are several elements of this problem.

- It is difficult for farmers to adjust production to meet changing market conditions. This is due to the large number of independent farms and the fact that many factors beyond the control of the farmer, ie. weather, disease etc. will affect yield. This coupled with the fact that it is not possible to quickly turn on or off production means that the market must adjust to farm supply in the short run. This inability to adjust quickly to changing conditions creates a high element of risk in agriculture.
- Another part of the farm marketing problem is that it is difficult for the farmer to improve prices through individual or group activities. Farmers are for the most part price takers, they can not influence the price of their products through output decisions. To raise prices through the control of supplies or marketing activities, farmers must act as a group.

The large numbers of farmers and their differing economic and social backgrounds frustrate farmers attempts to organize. Another part of this problem is the free rider. Group effort requires each member to sacrifice for the good of the group. When group activity is successful, the resulting price increase or other benefit will extend to all farmers regardless of their level of participation or whether they have contributed to the program at all.

- The competitive nature of agriculture tends to keep farm prices close to the cost of production. This cost - price squeeze would not be such a problem if the cost of production fell with falling farm gate prices. On the other hand, rising farm prices attract more farmers to a particular crop, bidding up the costs of production while acting to lower prices through increasing supply.
- Lastly, is the fact that since marketing firms are generally larger, they have superior bargaining power. Marketing firms tend to have national and international connections and better access to market information, further enhancing their competitive advantage. Farmers, on

the other hand, have shown resistance to participating in the marketing process, thus choosing to remain a supplier of raw material to the food industry.

#### f. Farm Marketing Questions.

Farmers have a tremendous stake in an efficient marketing system. An effective marketing system is one that will guide the production of products in quantities that when sold will give the farmer the maximum return after the deduction of marketing charges and production costs.

A knowledge of marketing and its problems will help the farmer make the following decisions:

- What to produce and how to prepare it for market? For example, which tomato variety is best for the target market and what packaging is needed?
- Where and when to buy and sell? Different products will have higher or lower prices through out the year.
- How much of the marketing job can be done by the farmer as an individual or as a group?
- What can be done to expand markets? Improvements may be possible in variety, quality, packaging, transport, etc.
- Which marketing arrangements are more desirable? This may involve a choice between a fixed contract versus commission sales.
- What can be done to correct undesirable practices or problems? This could include appeals to government for action, creation of a farmer's association to tackle certain marketing problems or a number of other activities.

#### g. The Farmers Marketing Plan.

The marketing plan consists of a set of objectives, strategies, and tactics which will help the farmer make production and marketing decisions. A marketing plan begins with the statement of goals and objectives. Usually, there will be several and they will have to be ranked in importance because of conflicts which may arise in trying to meet more than one goal at the same time.

When queried farmers often state that "their goal is to make more money". This goal is too broad to be a useful guide to marketing activity. Making more money is often the result of achieving other more specific goals and objectives. Farmers may be motivated by a number of goals: farm growth, greater efficiency in production, better access to markets, price stability, preservation of the family farm, etc. Farmers will choose between these and other goals and give them different priorities and these will shape their market decisions.

Goals and objectives indicate where one wants to go. Strategies are ways of getting there. There are a number of alternative strategies for achieving goals:

- rapid versus slow, steady growth,
- top dollar for each sale versus lower reasonable prices over the long run,
- high risk and high profit versus lower risk and lower profit,
- profit improvement from cost reduction versus price enhancement.

Tactics are the day to day decisions that implement marketing strategies. For example, a farmer with a low risk strategy might wish to fix a contractual price for his product.

The market plan is an important tool in setting up and evaluating a farmer marketing program. It helps the farmer organize his production and marketing program and answer marketing questions. Strategies follow goals and objectives and tactics follow from strategies in a logical fashion. The marketing plan also provides a way to measure the success of the marketing effort. Success occurs when tactics and strategies lead to goals. The marketing plan must be flexible and able to be altered to fit new circumstances. It is also important that the farmer know when he is departing from the plan and when it is time to make a new plan.

## 2. The Middlemen of Marketing.

Middlemen are individuals or businesses that specialize in the various marketing functions involved in the purchase and sale of goods as they move from producers to consumers. They are engaged in the different marketing jobs, grading, packaging, transport, advancing and collecting payment etc. Unfortunately many farmers look on those in these positions as parasites on those who really produce the goods. Farmers also complain about the profits of middlemen, but both groups are essential to furnish the final product to the consumer.

### a. Types of Middlemen.

The middlemen involved in vegetable marketing may be classified as follows:

- Merchant middlemen
  - Retailers
  - Wholesalers
- Agent middlemen
  - Brokers
  - Commission men
- Speculative middlemen
- Processors and manufacturers
- Facilitative organizations

## b. Merchant Middlemen

Merchant middlemen take title and own the products they handle. They buy and sell for their own profit. The retailer buys product for resale directly to the consumer. The retailer performs most if not all of the marketing functions, thus the retailers job is quite complex. Retailers are the most numerous of middlemen and include such people and organizations as market vendors and supermarkets.

Wholesalers sell to retailers, other wholesalers, and other users, but generally not to the end consumer. Wholesalers include; local traders who buy in the producing area directly from farmers and then ship them to larger cities as well as traders such as those located at the NAMBOARD facility at Nokwane. Wholesalers may specialize in one or a few items or may be full line wholesalers, who deal in a wide range of products. Wholesalers may operate on a cash and carry basis or they may extend credit or other services, others may require that the seller extend limited credit. Example: Gastaldi Brothers.

Agent middlemen act only as representatives of the clients they serve. They do not take title to, and therefore do not own, the products they handle. Agent middlemen sell their services to their clients, the farmers they represent. They do not actually sell goods to the consumer but use their know - how and knowledge of the market to bring buyer and seller together. Unlike wholesalers and retailers, who make their income from a margin between the buying and selling price, agent middlemen make their income in the form of fees and commissions.

The difference between commission men and brokers is subtle and one of degree. The commission man is usually given broad powers by the client who consigns goods to him. He usually is involved in the physical handling of the product, arranges the sale, collects payment, deducts his fee, and remits the balance to his client or principal. Commission agents are typical of the agents who normally operate in regional markets such as the Durban or Johannesburg Fresh Produce Markets. Examples: John Bell and Kie, Model Marketing Agency, Marco Cooperative.

A broker does not usually take physical control of the product and has less discretionary power in negotiating price than a commission agent. Brokers do not normally operate as agent middlemen in the vegetable industry, although they are common in other areas of food marketing, such as the grain industry.

Speculative middlemen are fairly uncommon in the fresh vegetable marketing channels. They take title to products with the purpose of profiting from short term price movements. A livestock or grain speculator may buy hogs or grain futures today and sell them back tomorrow or even in the same day. All middlemen are speculators to the extent that they face uncertain market conditions, wholesalers and retailers try to reduce their level of risk while the speculator seeks out and specializes in risk taking. Example: Boodhoo and Sons.

Processors and manufacturers are middlemen, who change the form of a product to make it more desirable to the consumer. They may be wholesalers or retailer or both. Fruit and vegetable canners are one example this of type of middleman. Another type of processor that is often overlooked in considering this category of middleman is the restaurant.

Facilitative middlemen are generally organizations that assist the various middlemen in their marketing activity. They do not participate directly in the marketing process as do merchants, agents, or processors. They may furnish the physical facilities for handling the products or they may establish the "rules of the game", such as hours of operation or terms of payment. Facilitative organizations generally derive their income from fees and assessments on those who use their facilities. The NAMBOARD facility as well as the Johannesburg National Fresh Produce Market are typical facilitative organizations. Various trade organizations may also fall into this category of middleman. While these organizations may not be active in buying and selling goods, they may be active in gathering and disseminating information, and conducting research. They may also act as unofficial policemen in preventing unfair trade practices and lobbying groups to represent their constituencies interests.

Farmers and consumers can and often do assume the middlemen functions of storage, transporting, selling and even processing. A farm roadside market is an example, where middleman functions have been transferred to farmer and consumer, eliminating the middleman. Why, then, are there so many middlemen if they could be replaced by farmer and consumer? The reason is that specialized middlemen can often perform marketing functions more efficiently than either farmer or consumer.

The emergence of middlemen specializing in activities, such as transportation, grading and packing, retailing, processing and so on, is an example of the division of labor and specialization, that has characterized modern society. The middleman frees farmers to specialize in agricultural production and allows the consumer to specialize in a non-farm career. The gain from specialization by market middlemen means that many marketing functions are marked by economies of scale. This means that the cost of performing a particular market function falls as the volume of product rises. For example, the freight rate for a full container of tomatoes to Durban works out to about R 1.00 / box, the rate for a container that is only half full is R 2.00 / box.

In addition, middlemen also reduce market search and transaction costs. There are costs involved with finding buyers and sellers and negotiating transactions between them. By specializing in these functions, middlemen relieve farmers and consumers of considerable expense they would otherwise incur in buying and selling.

What is the best system? A general rule is that middlemen will perform agricultural marketing functions when their costs are lower than those of farmers and consumers. The comparison is the middlemen's cost versus farmer or consumer costs for performing marketing functions, not the middleman's cost versus

no cost. The large number of middlemen involved in the agricultural marketing industry indicates the former condition is frequently met.

This is not to say that all middlemen are efficient or necessary or that farmers may not find it desirable and cost effective to perform certain middleman roles.

### 3. The Role of Price and Price-making Forces in the Marketing Process.

The exchange functions of marketing, buying and selling, are at the heart of the marketing process. As goods move through the system, they change hands many times, with each change in ownership, price must be decided upon. The study of markets and prices goes hand in hand, one cannot understand marketing without grasping the basics of pricing.

The agricultural marketing system is a system of communication, conflict resolution, and coordination. The marketing system must provide buyers and sellers with information that will assist them in their decision making, it must reach a compromise between producers' and consumers' goals and it must encourage efficiency within the system. In much of the agricultural marketing system and the world economy, this is accomplished through prices set by competition. Other systems used to direct the marketing system are: custom and tradition, ie. one bull is valued at five ram goats, and centralized, authoritarian control, ie. government control of prices and market channels. For various reasons, the market or competitive price system has dominated in directing the market place.

A basic principle of the market price system is that profit seeking behavior will serve societies' interest by allocating goods and services to their highest valued use. A competitive market price has the advantage of being impartial, fairness is left to the composite judgement of the marketplace rather than individuals or political parties. The system also has the advantage of continuously adjusting to changing conditions in the market place. In a competitive economy, prices transmit orders and directions. To some, high and rising prices mean increased profit and an incentive to go ahead and produce more. To consumer, however it may mean slow down or even do with out. Low or falling prices would signal opposite directions to producers and consumers.

Fluctuating, competitive prices perform three major jobs:

- They guide and regulate production decisions.
- They guide and regulate consumption decisions.
- They guide and regulate market decisions.

Prices are, therefore, a form of communication signal that act in various ways to coordinate market decisions. Prices serve as guides before decisions are made and rewards for correct decisions.

#### 4. Relative Prices and Agricultural Marketing Decisions

Profitable production and marketing decisions involves choices among many alternatives. Substitutes exist at every level of the food production and marketing system. Growers may use the same basic resources to produce tomatoes or peppers. They may choose to market their crops through various channels. Retailers and restaurants may decide to feature one food or another. Consumers have the greatest range of alternative choices. How do each of these groups; farmers, marketing concerns, and consumers, choose among these alternatives? Tradition, custom, and personal preference play some role in market choice, but prices and profit motive provide a better explanation of changing market choices. Farmers will plant more tomatoes and less cabbage if prices and profits favor tomatoes. Consumers may be encouraged to substitute more cabbage for lettuce if prices are favorable.

It is important to note that it is the relative price of one product to another which will influence what will be purchased, produced, and sold by farmers, marketing firms and consumers. The relative price is a ratio stating the price of one alternative product to another. The relative price of fresh market tomato to jam tomato is 2:1 if the price of fresh market tomato is R2.00/kg, while that of jam tomato is R1.00/kg. The relative prices not the absolute prices signal market choices. If tomato prices raise to R4.00/kg for fresh market and R2.00/kg for jam tomatoes, consumption patterns will remain stable. However, if the relative price of fresh market tomato to jam tomato increases to 4:1, there will be a shift by buyers to increase the consumption of jam tomato relative to fresh market tomatoes. In short, producers and consumers will respond to changes in the relative price of substitute items to improve their economic position. For producers, this means relative price adjustment toward increased profit. For consumers, it means cost-minimizing and value maximizing decisions.

#### 5. Supply and Demand

The basis for price in the competitive market place is supply and demand. There is probably no more overused or misunderstood term in economics or marketing than the "law of supply and demand". Since this concept is so fundamental to the formation of price, it will suit us to briefly consider the basic ideas of supply and demand.

Demand is a series or schedule of different quantities of a commodity that buyers will purchase at different prices at a given time and place. The law of demand is the relationship between quantities taken and prices. Simply stated, the lower the price, the more will be purchased; and the higher the price, the less will be purchased.

The reason for this relationship between the amount sold and the price charged arises from several facts about consumers and consumption. First, is that as a buyer has more of an item, the usefulness and desirability of each additional amount decreases. Next, consumers differ greatly in their likes and dislikes. For most consumers too, even though they like an item and would find

it useful, prices must be lower before they can buy it. Lastly, it is a mathematical fact that consumers must buy less of a product if it's price increases and their income does not change.

A hypothetical demand schedule can be given for prices and quantities that might exist for a given commodity at a given time and place. The graphic presentation of the demand schedule is called the demand curve. If the law of demand is valid, the demand curve will always slope downward and to the right. The demand schedule and the demand curve illustrate the relationship between price and quantity as established by potential buyers. It is important to note that the demand schedule does not indicate what the price and quantity are; only the effect that different prices will on amounts purchased. The price that will exist has not yet been established, and demand alone cannot set price. To forget this fact will lead to the common error of associating demand with a price change or a consumption change alone.

The demand that is important in marketing is effective demand. Effective demand is the wants and needs of the consumer backed up by purchasing power. The marketing question should always be, "how much will be bought at a price?"

Supply is a schedule of different quantities that will be offered for sale at different prices for a given time and place. The law of supply is the relationship that exists between price and the amount offered for sale. The higher the price, the more will be offered for sale, the lower the price, the less will be offered for sale. Just as for demand, a hypothetical supply schedule of quantities and prices can be made and from this a supply curve can be plotted. It must be remembered that here too, at any one time and place only one point on the supply curve reflects the actual situation. Again the supply schedule and the supply curve represents the relationship between price and amounts offered by prospective sellers. If the law of supply is valid, the supply curve will always slope upwards and to the right when presented graphically. It is common for changes in production to be labeled as changes in supply. Despite this common usage, supply in a economic sense means a series of price-quantity relationships.

Time is very important in considering the concept of supply. Supply exists at a given time. The time period being considered can be of different lengths, usually designated the short run, the intermediate run, and the long run. In the short run, supply can not usually change greatly since the existing amount of goods has already been produced and is limited to the amount on hand. The intermediate period is that time during which goods can be produced using only existing production facilities. The long run is that time period over which production facilities may be expanded or reduced. The question of time brings into consideration the idea of fixed and variable costs.

Fixed costs are those costs, which are involved with equipment and materials which can be used over several production periods. Once purchased, these are costs to the owner whether they are being used or not. Variable costs are those items which are used up in one production cycle. Variable costs therefore

vary according to the level of production. In vegetable production, the cost of pesticides and fungicides are variable costs, the cost of the sprayer is a fixed cost. Over the intermediate period, fixed costs do not influence a seller's decision to supply. If prices cover the seller's variable costs, he may decide to produce and sell. In the long run, however the costs of all factors of production, ie. fixed and variable costs must be covered and will enter into the determination of supply.

## 6. The Equilibrium Price.

The equilibrium price is that price where supply equals demand, this occurs where the demand and supply curves intersect. This equilibrium price is the price which will be established if the forces of competition are allowed to function. The equilibrium price is a compromise between the desire of sellers for a higher price and the desire of buyers for a lower price. At the equilibrium price, buyers will take all that sellers offer; the market will be cleared.

The equilibrium price is not a point that is readily found and maintained, normally prices are constantly fluctuating around the market clearing price. The change in prices may be small but occur frequently as buyers and sellers search for the equilibrium price. As prices move above the equilibrium price, it is a buyers' market, more is supplied than demanded and price cutting occurs. As prices move below this mark, it is a sellers market, and buyers will bid up prices towards the equilibrium level. Therefore, the equilibrium price is the price toward which actual prices will tend to move.

Many factors can cause supply or demand curves to shift, by acting to increase or decrease supply or demand schedules. Shifts in either supply or demand curves or both will result in a new equilibrium price being set.

## 7. Elasticity of Supply and Demand.

The law of supply states that as prices go down, quantities offered for sale will decrease. The law of demand states that as prices go down, the amounts purchased will increase. How much will quantities change in response to changes in price? The relationship between change in quantity to changes in price is known as price elasticity. Both supply and demand curves can be classified according to their elasticities into two groups. Demand is said to be elastic when the change in quantities taken are proportionately greater than changes in price. Inelastic demand is when the changes in quantities taken are proportionately less than the change in price. Demand curves where the change in quantity taken are of the same magnitude as the changes in price are said to display unit elasticity. Commodities which have few substitutes and are considered necessities generally have inelastic demand. Most agricultural products display inelastic demand curves.

The concept of elasticity can also be applied to supply. Products that are very responsive to price changes have elastic supply curves, while those that respond relatively little to

price changes have inelastic supply curves. Time is an important factor in the elasticity of supply. Over the short run, supply is nearly perfectly inelastic. Over the intermediate and long run supply curves tend to be more elastic, depending on the ease and cost of increasing or decreasing production. Perishable products also tend to have a greater inelasticity of supply, since producers have little choice in whether to move the product when it is ready to sell.

#### 8. Applications of Supply and Demand Analysis in Agricultural Situations

Farm prices tend to be more volatile than non food prices. This is due to the inelastic supply and demand curves for agricultural products, and because of the unpredictable changes in food supplies resulting from, weather, pests and diseases, and other factors. Because of the inelasticity of supply and demand curves, shifts in either supply or demand will result in relatively large price changes for farm products. Since the demand for most farm products is inelastic, falling prices will reduce total returns and rising prices will increase returns.

Inelastic demand provides farmers with an incentive to restrict production to raise prices and gross farm income. In practice, this is difficult for farmers to achieve. Individually, it is difficult for a single farmer to affect the level of supply necessary to raise prices. Since farmers tend to increase production in response to higher prices resulting from organized supply control schemes, there is a tendency for supply expansion to erode higher prices. Most successful agricultural supply control programs require government intervention. It is important to note that the costs of such programs are borne by consumers.

Due to the inelastic demand curve for farm products, an unexpectedly high yield increases supply and results in lower farm prices. Thus farmers are penalized for unexpectedly large crops. New production techniques also tend to increase supply, there by resulting in lower prices and reduced gross farm income. This may be balanced by lower production costs. On the whole, it is the consumer who benefits from technologies and conditions that increase supply.

Over the short run, there is no relationship between costs and prices received in the market. Since goods have already been produced, a high level of demand will result in higher prices and sellers may be able to dispose of their entire crop at a profit. Over a short time period no more production is possible to increase supply and drive down prices. At the opposite end of the scale, a low level of demand may mean that goods must sell at a loss. This is especially true for highly perishable products.

Over the intermediate and long run, producers can adjust production in response to price. If demand and prices are high, and high profits are being enjoyed, existing businesses will expand production and new firms may enter into production, prices will then come under pressure from increased supply. On the other hand, if demand and prices are low, businesses may operate at a loss and eventually enough firms will be forced out of business

so that the remaining producers will share in the demand under favorable prices. Therefore, over the long run, Production will adjust so that average prices will tend to equal average costs. The returns to capital, land, labor, and management will be no more or less than could be received if devoted to other forms of production. This is the basis for the cost-price squeeze in agriculture.

#### 9. Marketing and the Law of one Price

In order for the market to perform it's role of coordinating the activities of buyers and sellers, buyers and sellers must communicate with one another, exchange products with one another, and be exposed to similar price signals. In the market arena, buyers and sellers are highly sensitive to each others' transactions. Market boundaries are defined by the interdependence of buyers and seller over time, form, and space. These boundaries are not fixed and are the interdependence of buyers and sellers is measured by price sensitivity. The law of one price defines the relationship among prices in space, time, and form markets. This law implies that under competitive market conditions all prices within a market will tend to be uniform, after taking into account the costs of adding place, time, and form utility to products within the market.

#### 10. Price Discovery and Price Determination

Price determination is the process by which the broad forces of supply and demand establish a market clearing equilibrium price for a commodity. Price discovery is the process by which buyers and sellers arrive at a specific price for a given lot of produce at a given place and time.

Price discovery is a human process, subject to errors in judgement, and the relative bargaining power of buyer and seller. In real life, the discovered price will tend to vary around the equilibrium price. These variations in the price discovery process make it profitable for buyers and sellers to shop around and to bargain on price and terms of trade.

Several systems for price discovery for agricultural products have been identified. Two of these: individual, decentralized negotiation and organized, central market trading predominate in the fresh vegetable industry. In individual, decentralized negotiation each farmer bargains individually with buyers to set price. The resulting prices depends on the information, trading skills, and bargaining power of the buyer and seller. Prices tend to vary widely as result of this method of price discovery. In addition, the time and energy costs of this form of price discovery are rather high.

Organized, central markets shift the scene of price discovery from the farm gate to a central marketplace. All buyer and sellers, and their supplies and demands are represented in a central market. This form of price discovery generates more information than individual trading, reduces some of the costs of price discovery, and results in more uniform prices for transactions.

In some cases, prices for agricultural products may be set through bargaining. This involves collective bargaining and pricing on the part of farmers. It works best when there are few producers, production is concentrated in a small geographic area, and with products that can be stored or withheld from the market.

In summary, prices are signals that influence and coordinate the decisions and activities of producers and consumer and marketing middlemen. Prices are the result of supply and demand forces operating in a free competitive marketplace. Prices tend to return to the supply and demand equilibrium price when disturbed. In the short run, agricultural products tend to have an inelastic demand coupled with an inelastic supply. This results in highly variable farm prices and incomes. The highly competitive nature of agriculture results in a constant cost price squeeze for farmers. Discovering equilibrium prices for agricultural products is a difficult task for farmers and market middlemen.

Note: it is realized that this material is in parts rather technical and academic, it is intended that trainers will adapt this information and translate it into terms that farmers understand, since much of it describes reasons for things that farmers observe and/or a seeking answers for.

## G. Accounting and Record Keeping

### 1. General

Accounting is concerned with the recording of data generated by a business activity. Accounting is often referred to as bookkeeping, this term came in to usage, since until recently all accounting data was recorded into books, also called ledgers or journals. Accounting records provide the data needed to determine the measures of income and financial progress of a business over time, planning changes in the business and analyzing the success or failure of such changes. Such records also enable a determination of the resources owned by a business, what is owned by the business, how well the business is performing financially, and the strengths and weaknesses of a business.

In all but the simplest business, the amount of financial data generated by normal business activity is so great that the details cannot be committed to mind but require that written records of the data be kept. Records must not only be kept, but they must be classified and summarized in a systematic way so that the results are meaningful to the business owner and others who may require them. Accounting is, therefore, a means of: recording data generated by a business venture, classifying and summarizing the data into useable forms, and most importantly communicating what has been learned from the data.

Potential users of accounting information include:

- The owners of the business. They will want to know if the business is profitable, what the resources of the business are, compare financial progress over time, make plans for the future and many other facts that analysis of the business accounts can yield.
- Management. Accounting information provides management with a vital tool in guiding the affairs of the business and making intelligent decisions.
- The bank. If the owners wish to obtain credit to fund business operations, the bank will require such information. The bank will want to ensure payments of interest will be made and that the business will be able to repay loans when due.
- Tax inspectors and other government agencies involved in the supervision of business affairs. Proper accounting is generally required for legally registered companies, including cooperative associations, for tax and other purposes.
- Other parties. These could include: prospective buyers, potential investors, businesses supplying goods on credit, and others.

Cost accounting is the application of accounting procedures to establish what a job or product costs. Costs are divided into direct costs and indirect costs. Direct costs are the costs of goods and materials directly involved in the production process. These items can be further divided into fixed and variable costs. Indirect costs are also known as overheads. These are costs which do not contribute directly to the production process. Included are such things as management salaries, telephone, plant maintenance, and other items. Cost accounting is important in determining selling price, may reveal areas where costs may be reduced, indicates productivity of labor and machines, and other applications.

Budgeting is another important application of accounting techniques that is useful in decision making. Budgeting is a method of testing changes in business operations or production processes before they are initiated. Such changes can be in the cost of packaging, transportation, new machinery etc. Budgeting assists in determining the effect on net returns to the business as a result of anticipated changes. Partial budgets are used for changes affecting only a small portion of the overall operation. Complete budgets are used to evaluate changes which have repercussions on all or most facets of the business. Budgeting is a practical means of economically evaluating prospective changes in operations. It does not indicate optimal levels or types of operations, but provides a means of selecting the better of a limited number of alternatives.

A cash flow budget is a method of looking ahead and seeing where funds are going to come from and when expenses will have to be met. The cash flow budget gives a clear idea of the actual cash requirements of the business and records cash movements into and out of the business. It will indicate how much cash is needed and when. The cash flow budget will indicate unexpected shortages and give time to raise the necessary funds.

The whole of financial accounting is based on a very simple concept, known as the accounting equation. This can be written as: Resources in the business = Resources supplied by the owner. The resources supplied by the owner is called capital. The actual resources in the business are called assets. The equation may now be written as: Assets = Capital. In most instances, however some one other than the owner supplies some of the assets. Liabilities is the term applied to the amounts owing to other people for assets. The accounting equation is now changed to: Assets = Capital + Liabilities. It is a fact that both sides will equal one another. This will always be true no matter how many transactions there may be. The actual amounts of assets, capital, and liabilities may change, but the total of the assets will always equal the total of capital plus liabilities.

Assets consist of property of all kinds, such as buildings, machinery, stocks of goods, and vehicles. Assets would also include: debts owed by customers and money in the bank. Liabilities consist of money owing for goods supplied to the business, and for expenses. Loans made to the business are also included. Capital is often referred to as the owner's equity or net worth.

As a result of the equality of the accounting transaction, every business transaction affects two items. It may increase assets and increase liabilities, increase some assets while decreasing others, decrease assets and liabilities, increase assets and capital, decrease assets and capital or decrease liability and increase capital. The net result is that for each transaction the total of assets equals the total of capital and liabilities.

The keeping of accounting records for a business involves the following steps. Every transaction must be documented, for example on a receipt, invoice, check, etc. The data on the documents is summarized in journals, eg. cash receipts journal, cash payments journal, etc. The summarized data is posted to the ledger. The ledger is a book where records accounts are debited or credited. Cash receipts are debited to the bank account and cash payments are credited to the bank account. The accounts may be classified in various ways depending on the nature of the business.

A common system of classifying accounts is into: assets, liabilities, expenses, income, and owners equity. At regular intervals, daily, weekly, monthly, the accounts are totaled or balanced and a list of accounts is drawn up to check that debits equals credits. At the end of a financial period or accounting period, usually a year, the accounts are adjusted, closed, and balanced. The trading and profit and loss accounts will show whether a profit was made or not. The following statements will be drawn up from the accounts in the ledger. The income statement showing total expenses and income for the year and profit or loss made. The balance sheet gives the owner's equity, assets, and liabilities on a certain date.

The profit and loss account and the balance sheet are multi-purpose documents. Depending on the company and the information required other reports or accounts may be desired. The accountant is often faced with the dilemma of giving clients information they are asking for or the information they should be asking for.

It may be surprising to note that there is no "overall accepted theory of accounting". This is pleasing to many practical accountants and frustrating to many academic accountants. Accounting theory does provide a frame of reference in which to judge accounting practices and guides the development of new practices and procedures. It must also be pointed out while there is no overall accepted accounting theory, there are legal and other regulations governing financial accounts which must be observed, and generally accepted standard accounting methods have been developed.

No matter which system is employed and which accounts kept and reports and statements generated, they should have the following characteristics of useful information:

- **Relevance.** The information supplied should satisfy the needs of its users. This is regarded as one of two main qualities.

- **Reliability.** The information provided should stand up to independent scrutiny, this will enhance the reliance that can be placed on such information. Reliability is considered to be the other main quality.
- **Objectivity.** Information which is free from bias will be more useful and reliable than information which is not. Management is often guilty of introducing bias to enhance the measure of it's performance, it is the auditor's job to counter this tendency and ensure objectivity.
- **Ability to be understood.** Information will not be of much use unless it is presented in a form that the recipient can understand and use.
- **Comparability.** Users of accounts will want to compare them with previous and future accounts of the same company and those of other businesses; without comparability, accounts would be of little use.
- **Realism.** Accounts should give an accurate and fair view.
- **Consistency.** A basic concept in accounting, this does not preclude adoption of new and improved methods or changes to keep pace with changes in the nature or complexity of the business.
- **Timeliness.** Up to date information is more useful than outdated news.
- **Economy of presentation.** Too much detail can obscure important details and present difficulty in understanding. In addition, accounting is costly and unneeded or unwanted information will increase the businesses costs.
- **Completeness.** A well rounded presentation of the company's activities is needed.

## 2. Specific Accounting Systems

The following section presents a model accounting system that was developed in Jamaica, in a trial and error fashion, while working with farmer associations, much like those which are being proposed under the CAPM project extension. It attempts to cover most of the accounting needs that a vigorous, multi - faceted farmers' organization might require. It is not rigid, but capable of being used in whole or in part as the needs and skills of the developing association require. It suggests certain procedures and ideas, such as conducting marketing arrangements for members on a commission basis, and ways of pooling to arrive at payments to farmers for goods delivered, etc. This is because this is how the system evolved in Jamaica and not because the author perceives this as being the only or ultimate accounting system. It is hoped that it will serve as the basis for modifications and adaptation, that will ultimately produce an accounting system (or several) tailored to needs of each individual farmers' organization.

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**ACCOUNTING AND RECORD KEEPING  
SECTION III**

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**A. Incoming Goods**

All deliveries must be documented using suppliers invoice, receipt, or delivery note - in the case of credited or purchased goods or supplies. The delivery note or suppliers invoice should contain the following information:

- Delivery or invoice number  
This number is used by the bookkeeper as a reference in the future regarding this particular transaction.
- Date
- Suppliers name
- Association's name
- Quantity
- Unit
- Item
- Unit price
- Total cost
- Notation

If credited to the Association, ie. to be paid, or if paid - then the date of payment, the cheque number or cash, and the amount should be documented.

- The initials or signature of the person receiving the payment.
- The initials or signature of the person receiving the goods.

The information contained on a suppliers invoice or delivery note is posted into the cash disbursements journal or accounts payable ledger as appropriate. Certain details of the transaction, such as item, date, and quantity, would also be recorded in the inventory file.

**B. Delivery Notes**

Delivery notes create their own documentation in the case of produce received from members. All produce received from members must be recorded onto a delivery note in a delivery book. This information is recorded in duplicate into the delivery book using a carbon paper. The delivery note serves as an official receipt for the farmer for produce delivered and the original is given to him. The carbon copy remains in the delivery book and serves as the basis for payment to farmers. The farmers' copy verifies the delivery and particulars and is very useful when errors occur as it provides a reference or starting point for the association's manager or bookkeeper in their investigations. Since the delivery note forms the basis for payments to farmers and many other accounting records, it is extremely important that this information be documented promptly and correctly. Failure to record the information at the moment of delivery invites error into the accounting process and subsequent operations.

The delivery note issued for produce delivered by members should include the following information:

- Delivery number - This is important as it is used by the bookkeeper as a reference regarding this particular transaction. It also assists in ensuring that all deliveries are recorded and accounted for in subsequent operations.
- Date - Again, this must be the actual date received and not a day or week later as this invites error.
- Farmers name - Exact spelling is critical so that the payment check can be drawn up properly, failure to do so may result in the bank refusing to cash the check for the payee.
- Association's name
- Quantity
- Units
- Type of produce
- Comments - regarding quality, subject to further grading etc.
- Collector's signature or initials.

It is recommended that the goods be received from members on a consignment basis, in this way the association is protected from losses arising from:

- Grading and handling
- Shrinkage and spoilage
- Inability to predict selling price
- Any other unforeseen circumstances such as fire, flood, theft, etc. resulting in the loss of produce.

Consignment means that the association would only act as the farmer members representative or agent in marketing their produce. The association would not take title to and therefore not own the produce it handles. This type of arrangement would be justified by the fact that since the members are also the owners of the association, any risk or loss assumed by the association would automatically fall back on the member as owner. This arrangement would also protect the financial integrity of the business from unforeseen losses.

It is further recommended that two sets of delivery books be kept for the receipt of members produce. These would be used on alternate weeks, to allow the accounting staff to record and process the information contained in each book while the alternate set is being used. The alternate sets of delivery books could be designated A through D, and E - H, or in some similar fashion to distinguish between the set to be used each week.

In most cases the amount of produce paid for would normally be less than that actually received due to selection and grading procedures. Several ways can be devised to deal with this selection or grading process. The fairest way is to tag each lot using a piece of paper tape and an indelible marker to identify the particular lot.

The delivery number, A -01 and date, for example, would be sufficient to identify the produce delivered from a particular member on a certain date. This would then be graded and the amount of rejected produce be deducted from the total received in the delivery book. This would then be the quantity of produce the farmer would be paid for. While this is certainly the most equitable system of accounting for grading losses, as it identifies and penalizes the supplier of poor quality produce and rewards the good grower for his effort.

This system has certain drawbacks in that this approach is more time consuming and ultimately more costly than other methods. It also introduces more possibility for human error as it requires tracking each lot after delivery until grading has occurred and the subsequent reductions made. Lastly, it does not account for shrinkage and other losses which may occur after grading. Farmers must be made aware that rejected produce can not be returned or retained for the grower, unless he chooses to physically deliver the produce and witness the grading, as the cost and logistics of this would be prohibitive.

An alternative method of handling this problem is to devise a standard deduction, say 10% which is routinely deducted from each delivery to account for losses due to shrinkage and grading. The percentage of deduction is calculated by tracking several lots of produce from delivery through the grading process and ultimately the sale of the produce and then calculating the loss in weight which occurs and expressing this as a percentage to be deducted from each delivery. This system is attractive in that it is easy for the packinghouse staff to administer and track and is less costly and time consuming over all. It also accounts for all losses of produce which are a part of the business. The main problem is that it does not identify the supplier of poor quality produce and penalizes the better growers.

It is conceivable that in some instances the association might purchase produce for cash at the moment of delivery. In this case, if the supplier did not supply an invoice, a delivery note would be filled out as above and it would be marked paid cash or check. In the case of payment by check, the check number would also be noted. This information is posted to the cash disbursements journal under the appropriate categories. In the case of cash purchases, the tear out copy marked paid cash, would be placed in the cash box in place of funds paid out, and at the end of the business day would be tallied and attached to the cash control form, and the amount also posted to the cash disbursement journal under the days date and the appropriate expense category. Entries of these items would also be made to the inventory file.

It is very important to note that the suppliers invoices and delivery notes constitute the raw data, that along with sales invoices and cash sales information provide the basis for all other accounting procedures and reports. It is very important therefore that the utmost accuracy be maintained with these records as is proper security to prevent loss of this vital information.

## C. Cash Control

Cash control sheets are prepared daily at the end of the business day, by the association manager or bookkeeper, to recap the daily business transactions. The cash control sheet records the origin of all cash and checks received, petty cash disbursed, and deposits lodged into the associations checking account. A cash book could be used to record these transactions, however, the cash control sheet has the added benefit of acting as a daily check on the movement of cash in the business.

Particulars of the cash control sheet are as follows:

- Date - for which the sheet is prepared.
- Total cash and checks received from retail produce sales, the total is taken from the daily retail sales book.
- Total cash and checks received from farm supply sales as recorded in the daily farm supply sales book for that date.
- Total cash and checks received from wholesale produce sales. This is taken from the total of paid invoices in the wholesale books for the day.
- Total cash and checks received for office services. This is taken from the total of receipts for the day.
- Total cash and checks for customers paying on their credit accounts.
- A notation of any cash which is over or short arising from tallies of the above items.
- Any other cash or check received, and a notation explaining the nature of the transaction, such as haulage charge etc.
- The amount kept as a start up amount in the petty cash account. This may be any amount decided upon by the committee or management as appropriate.
- The total of cash disbursed, taken from the total of all paid receipts, invoices, petty cash vouchers etc. for the day. It is important that any cash spent be recorded on one of the above with a notation of date, amount, item, quantity etc.
- The amount of start up money being kept on hand in the petty cash account for the following days business.
- The amount of cash and checks which is being deposited into the bank, saving or checking account. The deposit slip must correspond to the amount of deposit listed on the cash control sheet.

- The signature of the person preparing the cash control sheet and the person verifying the totals.
- The section at the bottom of the sheet is used to record the relevant information pertaining to all checks received whether on account or for sales. Reference should be made to: the customer's name, the amount of payment, bank name and check number, sales book reference or folio, or notation as to the location of the sales record or payment on account.

The cash control sheets should be perforated and stored in a ring binder for future reference.



#### D. Wholesale Invoice Books

The association should maintain two sets of wholesale invoice books. These are lettered A - D and E - H and are used on alternate weeks to allow the manager or bookkeeper to extract and process the information contained within regarding the past weeks sales. The exact number of wholesale invoice books will depend on the needs of the association based on it's level of operations. Each invoice is numbered, the combination of letters and numbers is used as a folio or reference for the particular sale. Other information that must be recorded on the sales invoice are:

- Date of the sale - important in referencing the transaction, this must be the date of the sale.
- Name of the Association - very critical on credit sales so the buyer knows who is supplying the goods, ie. who is owed, and the correct spelling of to whom the payment check should be drawn.
- Name of the customer - this is especially important for credit sales, so that the correct entries may be made in the accounts receivable or trading account ledger.
- Amount.
- Units - kilos, boxes, etc.
- Item.
- Unit price - ie. price per kilogram or per box etc.
- Item total price.
- Total invoice amount.
- Notation if paid cash or owed.
- Initials or signature of association sales person or representative.
- Signature of purchasers or agent.

Just as for delivery notes and invoices, the information contained in the wholesale book is original data. Therefore, accuracy is of utmost importance to the maintenance of proper accounting records, as this information is used to prepare farmers payments, as a basis for other ledger and journal entries, and the preparation of other reports. Consequently, this information must be safe guarded against loss until the appropriate entries have been posted. In any event, it would be wise to store the wholesale invoice books, and all other records of original entry, in an orderly fashion for future reference.

#### E. Credit Accounts

The association may opt to extend credit to wholesale customers and members for the purchase of farm supplies from the association. In the case of wholesale customers, credit sales are an accepted form of doing business. Failure to extend credit may seriously limit the association's access to certain customers and segments of the market. Proper credit control and strict credit policies will help minimize any potential abuses or problems in this area.

In the case of members, the association may choose to offer farm inputs or supplies to members on credit against outstanding payments to the member for produce supplied. While a broader credit policy toward members may be desired by the members, this should be considered carefully as the financial requirements of such a credit scheme would probably be beyond most associations. Difficulty is obtaining repayment for unsecured credit is also a factor to consider.

Each customer or member has their own credit account, which is maintained in the credit accounts or accounts receivable ledger. The information required to update these accounts is obtained from wholesale invoice books, cash control sheets and farm supply sales journal. A separate page in the credit account ledger is maintained for each credit account and is laid out as follows:

- Name of the creditor
- Date of the reference entry
- Reference - notations are either:
  - Wholesale invoice reference number
  - Farm supply item
  - Cash advance
  - Farmers payment deduction,
  - Bank name and check number.
- Folio - notations are as follows:
  - When an invoice number or farm supply notation is the reference entry, the "date paid" is the folio.
  - If the reference is an advance, "cash" is posted as the folio.
  - If the reference is a deduction made from farmers payments, "cash" is recorded as the folio.
  - If the reference is a check or cash payment, the "invoice number" it is paying is the folio.
- Debit - If the reference pertains to a payment, the amount is recorded under the debit column.
- Credit - If the reference pertains to a payment, the amount is recorded under the credit column.
- Balance - The balance represents the amount currently owed in the account.



## F. Credit Control

Any business which sells goods on credit must maintain a close check to ensure that debtors pay their accounts on time. If this is not done, the amount of debtors can grow to a level that will cripple the business. A well thought out and rigorously applied credit policy will help control this problem. The following procedures should be carried out:

### 1. Set Credit Limit

A credit limit should be set for each debtor or credit account. They should not be allowed to owe more than this amount. The amount of the limit will vary depending on the circumstances. Factors, such as the size of the business and the amount of business conducted with the firm, as well as its past credit history and record of payments, will help in determining the credit limit.

### 2. Payments

As soon as the due date for payment has been reached, it should be verified whether payment has been made or not. Failure to make payment on time may mean that it is necessary to refuse to supply any more goods on credit until payment is made.

### 3. Payment Follow up

Where payment does not seem to be forthcoming, it may be necessary after investigation to take legal action to sue the customer for recovery of the debt.

### 4. Credit Limits

It is important, that before extending credit, the customer be made aware of the credit policy and his particular limit, as well as what will happen if he does not pay his account by the correct date. The details of the credit policy and the consequences for non-payment should be provided, in writing, to each new account. The client's agreement with the credit terms, in writing, should also be obtained.

## G. Inventory Control

Inventory is the total of all goods on hand. Inventory control consists of accounting for all these items. Information for the inventory comes from daily sales reports, dealers' invoices, delivery records, spoilage reports, and actual physical counts at the end of each month.

An inventory account is set up for each item to be traced in the inventory record journal. Weekly or monthly each account is adjusted to reflect all inward and outward movement and the account balance checked against the actual physical count. Adjustments are made to the accounts to reflect the actual count and discrepancies investigated to determine their origin.

## H. Cash Disbursement Journal

All expenses paid by the association are recorded into the cash disbursements journal. Entry data for the journal comes from the cash control sheets and checking account summary. Columns in the cash disbursements journal are set up as follows:

- Date of payment
- Name of payee
- Amount if paid in cash, or
- Amount if paid in check.
- Check number.
- A breakdown by the specific expense category represented by the disbursement, for example: salaries, rent, fuel, stationary, etc.

The exact number and specific expense accounts maintained will vary according to the nature and complexity of the association's business operations.

The amount paid is recorded twice, once under the folio column, that is cash or check, and again under the specific expense category. When each page as been filled or at the end of the month, the total of cash and checks disbursed must equal the totals of the specific categories added together. Entries should be made in chronological order by date.

### CASH DISBURSEMENTS JOURNAL

Date	Paid to:	Paid Cash	Bank Withdrawal	Check Number	Expense Category
Aug. 1	John's Esso	E50.00			E50.00 fuel
Aug. 3	J. Smith		E200.00	SWB-752	E200.00 salary
Aug. 5	I. Reid		E435.20	SWB-753	E435.20 produce
Total		E50.00	E635.20		E685.00

The chart above represents a page in the cash disbursements journal. Please note that each expense category, for example fuel, salary, produce, etc. would typically have it's own separate column, so that the journal page would be extended to the right, by however many expense account categories necessary.

## I. Cash Receipts Journal

All income received by the association is recorded into the cash receipts journal, also known as the sales journal. Data for the journal entries comes from the cash control sheets. Columns in the cash receipts journal are laid out as follows:

- Date of receipt.
- Reference - for what or from whom the payment is coming.
- Amount received in cash, or
- Amount of check received.
- Check reference - bank initials or name.
- Check number.
- A breakdown as to the source of income, for example; wholesale produce, farm supplies, membership, accounts receivable, truck rental, etc.

As in the cash disbursements journal, the amount received is recorded twice, once under the folio column, and then again under the income category. The exact number and specific income accounts maintained will depend on the nature and complexity of the business. When each page has been filled or at the end of the month, the columns are totaled and the total of cash and checks received should equal the totals of the specific categories added together. Entries should be in chronological order by date.

### CASH RECEIPT JOURNAL

Date	Received from:	Cash rec'd	Check rec'd	Check ref.	Check No.	Income Acct.
Aug.1	Cash	E500.00				E500.00 produce
Aug.2	Philani		E250.00	SWB	2345	E250.00 produce
Aug.3	J. Farmer	E50.00				E50.00 transport
Aug.4	O. Nxumalo	E30.00				E30.00 membershp
Aug.4	Mr. Boodoo		E957.65	SWB	0976	E857.65 produce E100.00 transport
Aug.5	A. Shongwe	E63.84				E63.84 seed
Total		E643.84	E1207.65			E1851.49

Note: Income accounts would be extended to right as necessary.

## J. Purchases/Accounts Payable Journal

When the association purchases supplies on credit, they are recorded in the purchases journal. The monthly total is used in preparing the profit and loss statement. In most instances, supplies will be purchased on credit. Outstanding amounts are totaled at the end of each month and posted to accounts payable in the general ledger. Entry data for the purchases/accounts payable journal is generally taken from the suppliers invoice. The purchases/accounts payable journal contains the following information:

- Date - as per the invoice.
- Vendor or suppliers name.
- Invoice reference number.
- Amount - from invoice. This column is totaled at the end of the month and the amount is entered onto the profit and loss statement under purchases.
- Date of payment. Invoices which are not paid at the end of the month are totaled and posted to the general ledger as a as an expense under the appropriate expense account, for example farm supplies.
- A breakdown by expense category, ie. farm supplies, stationary, etc.

### ACCOUNTS PAYABLE JOURNAL

Date	Vendor Name	Invoice No.	Amount	Date Paid	Expense Account
Aug.1	P.H.I.	23795	E673.90	10-1	E673.90 seed
Aug.7	SwaziFert	66656	E3000.00	10-1	E3000.00 fertilizer
Aug.9	Paper Place	891	E59.47	10-1	E59.47 stationary
Aug.30	Agrotech	34257	E5690.00		E90.00 seed E600.00 fungicide E2000.00 insecticide E3000.00 drip hose
Total			E9423.37		E5690.00 unpaid c/d

## K. Accounts Receivable Journal

When goods are supplied on credit, they are recorded in the accounts receivable or credit account ledger, as well as the accounts receivable journal. Entry data for this journal comes from the credit accounts ledger. It helps to use a work sheet to put entries into chronological order before posting into the accounts receivable journal. At the end of the month, all entries are totaled and recorded into the general ledger as credit under income. Entries in the accounts receivable journal are laid out as follows:

- Date - credit was extended.
- Name of the account.
- Amount received on credit.
- Breakdown by income account category, for example, wholesale produce, seeds, fertilizer, etc. for which the credit was extended.

### ACCOUNT RECEIVABLE JOURNAL

Date	Account Name	Amount	Wholesale Produce	Seeds	Fert- ilizer
Aug.1	Spar	E500.00	E500.00		
Aug.1	Boodoo	E5000.00	E5000.00		
Aug.2	Flippie Zwart	E2500.00	E2500.00		
Aug.3	Calabash Rest.	E400.00	E400.00		
Aug.3	P. Dlamini	E235.00			E235.00
Aug.4	Boodoo	E5000.00	E5000.00		
Aug.4	S. Mamba	E332.80		E52.80	E280.00
Total		E13967.80	E13400.00	E52.80	E280.00

Note: Income account categories would be extended to the right as needed.

## L. Accounts Receivable Report

The accounts receivable report is compiled at the end of each month's accounting period. This report serves as a method for determining the status of the businesses credit accounts. This report allows management to see how much money is owed by creditors and the length of time these amounts have been outstanding. It is known that the longer a debt is owing the greater the likelihood that it will not be paid. Bad debts are a normal business risk, and are generally written off after a period of time.

The columns in the account receivable report are:

- Name of the account - creditor's name.
- Date of the last payment on the account.
- Amount of credit extended within the past 30 days.
- Amount of credit granted between 31 - 60 days past.
- Amount of credit granted between 61 - 90 days past.
- Amount of credit granted over 90 days past.
- Total amount owed by each credit account.

At the end of each month the grand totals are tallied at the bottom of each account. When a debt is determined to be bad, the asset represented by the creditor's account is deemed worthless and must be eliminated. This is done by crediting the debtor's account to cancel the asset and increasing the expense account of bad debts by debiting it there. This is also reflected in the debit side of the profit and loss account. The account is still retained credit account ledger in the hope that it will be repaid someday.

#### ACCOUNTS RECEIVABLE REPORT

Acct. Name	Last paid	Current	30 days	60 days	Over 60 days	Total
Philani	20/12/93			E350.00	E500.00	E850.00
Spar	3/1/94	E235.00				E235.00
Swazi Pak	30/12/93		E45.00			E45.00
Singh	15/9/93				E3500.00	E3500.00
Ok	30/12/93	E800.00	E150.00			E950.00
Totals		E1035.00	E195.00	E350.00	E4000.00	E5580.00

* Transfer to bad debt						
Singh					E3500.00	E3500.00
						E3500.00

#### M. General Journal

In some cases, monthly employment taxes and/or other salary deductions are deducted from employee's salaries one month and paid to the collector of taxes and/or health plan, provident fund, etc., the following month. To deal with this practice, the accounting system records the particulars into the general journal, the entries are then posted to appropriate general ledger accounts. The general journal is a way of recording and accounting for such non-cash transactions. Any withholdings for the previous month from employees salary are posted into the general journal as a debit under the appropriate account, as are any employer contributions. The combined amounts (employer and employee contribution) payable to each to each of the individual tax and another account categories are posted as credit entries. After these entries are made the two columns should balance. A

breakdown is then made of the employers contribution to each account. The total should equal the total organization contribution already posted.

The credit entries, which are the total contributions due to be paid the following month, are recorded as credit entries under the various accounts in the general ledger. The organization obligations are recorded as debit entries into the various accounts, ie. NIS/Organization contribution, in the general ledger. The total of both employee and employer tax obligations is also recorded as a debit in the accruals account in the general ledger.

Payments made during the current month for the previous month's obligations are recorded as debit entries in the general journal. The actual amounts are taken from checks paid to each account. A reversing entry is made into the accruals account and posted as a credit in the general journal.

Table 3: GENERAL JOURNAL

	December 1993	Debit	Credit
1.	Employee contributions from wages	E332.04	
	Organization Contribution	E278.19	
	NIS/Collector of taxes		E185.00
	NHT/ "		E233.05
	PAYE/ "		E90.96
	ED Tax/ "		E91.22
	Organization contributions for November		
	NIS - E93.75		
	NHT - E139.83		
	ED tax -E44.61		
2.	Collector of Taxes/NIS	E148.00	
	" /PAYE	E80.85	
	" /ED tax	E82.92	
	" /NHT	E207.30	
	Accruals		E519.07

## N. GENERAL LEDGER

After monthly work sheet totals are tallied and verified, the expenses are posted to the general ledger. Amounts added to expense accounts are listed as debit entries. The total for goods supplied on credit from the accounts receivable work sheet is not recorded into the general ledger at this time but is recorded as debit entries into the accounts receivable journal later. The general journal entries are posted and included in the equation. (Note that the Collector of Taxes entries were posted as credits and appear as credits on the balance sheet.) These expense entries are balanced against the totals of cash in hand and cash in bank, which are entered into the general ledger as credit entries.

Verifications of income account amounts is also performed on monthly work sheets. The income entries are entered as credits into the appropriate accounts and balanced against the cash receipts entries in the cash and cash in bank accounts which are posted as debits into these accounts.

When the income, expense, and general journal entries balance the general ledger accounts are totaled. To total an expense account, the previous month's balance plus the debit entry for the month minus the credit entry for the month equals the current balance. To total an income account, the previous month's balance plus the credit entry for the month minus the debit entry for the month equals the current balance.

In order to get accurate sales information, the accounts receivable entry is recorded at this point. As previously stated, all credit sales are posted as debits in the accounts receivable journal. However, using the information compiled on the monthly work sheet, credit sales are broken down into categories and credit entries are posted to the various income accounts for sales made, such as: wholesale produce, farm supply sales etc. These entries are included in the current ledger balance for the particular account. Of course, the total of credit entries will balance the debit entries made in accounts receivable.

In the third balance sheet, the current ledger totals must be verified, the expense account totals are listed as debits, while the income accounts are listed as credits. If everything is correct, both columns will be equal.

EXPENSES - MAY

	DEBIT	CREDIT
Cash/bank		E45,242.76
Cash		E9,761.50
Accruals	E531.97	
NIS	E93.75	
NHT	E154.35	
ED Tax	E51.45	
Salary	E3,686.09	
	E346.67	
P/T Labor	E972.00	
Produce/W	E20,376.05	
Produce/R	E1,534.40	
Farm Supply	E19,942.20	
Fuel	E892.00	
Trans. Rental	E500.00	
Rent	E500.00	
Supplies	E24.80	
Manager's Fee	E4,500.00	
Min. of Agaric.	E845.25	
Col. of Taxes		E101.07
NHT		E257.25
Col. of Taxes		E102.90
Col. of Taxes		E185.00
Utilities	E11.50	
Board Reim.	E250.00	
Vehicle Maint.	E338.00	
<b>Total</b>	<b>E55,650.48</b>	<b>E55,650.48</b>

INCOME - MAY

	DEBIT	CREDIT
Cash/bank	E9,170.89	
Cash	E31,818.20	
Retail Sales		E4,592.85
W. Sales		E6,845.62
F. Supply Sales		E20,770.35
Membership		E120.00
Acct. Rec'able		E7,503.80
Misc.	E483.53	
CARE Inputs		E2,000.00
<b>Total</b>	<b>E41,472.62</b>	<b>E41,472.62</b>

GENERAL LEDGER BALANCES - JUNE

	DEBIT	CREDIT
Cash/Bank		E76,176.87
Cash	E45,551.00	
Retail		E8,186.25
Wholesale		E33,616.22
Membership		E140.00
CARE Inputs		E9,000.00
Misc	E85.22	
Act. Rec'able	E2,224.45	
Farm Supply		E50,290.00
Relief	E226.00	
Accruals	E29.94	
NIS	E168.75	
NHT	E277.83	
Ed. Tax	E92.61	
Salary	E8,148.76	
P/t Labor	E2,512.00	
W. Produce	E31,909.25	
Retail Produce	E2,512.00	
Farm Supply	E66,415.00	
Fuel	E2,050.30	
Trans. Rent	E700.00	
Rent	E2,000.00	
Supplies	E110.40	
Bank	E34.00	
Manager	E8,500.00	
MinAc	E1,690.00	
Travel	E294.00	
Farm Day	E1,432.55	
PAYE		E20.19
NHT		E51.45
Ed. Tax		E20.58
Veh. Maint.		E37.00
Utilities	E11.50	
Board	E250.00	
Veh. Maint.	E338.00	
 Total	 E177,538.56	 E177,538.56

## 1. General Ledger Disbursements

- Check totals on work sheet against those in the Disbursements Journal.
- Calculate a total on all cash paid out.
- Calculate a total on all checks paid out.
- Total cash plus checks paid out equals the grand total on the work sheet.
- Total checks paid out is then posted to the Cash in Bank account in the general ledger as a credit entry.
- Total cash paid out is posted to the Cash in Hand account in the general ledger as a credit entry.
- Salaries are posted to the Salary account plus total individual taxes - taken from monthly tax work sheet.
- All taxes with Collector of Taxes added to the account name should be credited, those without should be debited.
- Accounts Receivable should be credited if it is a negative number.
- All other disbursements on the work sheet should be posted to their respective accounts in the general ledger as debit entries.

## 2. Receipt Journal

- Check totals on work sheet against those in the receipt journal.
- Calculate a total on all cash received.
- Calculate a total on all checks received.
- Total cash plus checks received should equal the grand total on the work sheet.
- Total checks received is posted to the Cash in Bank account in the general ledger as a debit entry.
- Post all other receipts on the work sheet to their respective general ledger accounts as credit entries.

## 3. Credit Sales Journal

- Check total on work sheet against total in credit sales journal.
- All farm supply credit sales should be posted to the Farm Supply Sales account in the general ledger as a credit entry.

- Wholesale credits should be posted in to the Wholesale Sales Account in the general ledger as a credit entry.
- The total amount of credit sales is posted to the Accounts Receivable account in the general ledger as a debit balance.

#### 4. General Tax Journal

- Total wages must equal total Individual Taxes on monthly tax sheet.
- Organization Contribution total must equal total Organization Taxes on the monthly tax work sheet.
- NIS - Collector of taxes equals total NIS on the monthly tax work sheet.
- NHT - Collector of Taxes equals total NHT on monthly tax work sheet.
- PAYE - Collector of Taxes equal total PAYE on monthly tax work sheet.
- ED Tax equals total Ed. Tax on monthly tax sheet.
- The total NIS, NHT, PAYE, and ED Tax should be equal Wages plus Organization Contribution.
- Organization Contribution for \_\_\_\_\_ month.
  - NIS equals NIS Organization on monthly tax work sheet.
  - ED Tax equals ED Tax on monthly tax work sheet.
  - Total NIS, NHT, and Ed Tax should equal total Organization Contribution for the month.
- Collector of Taxes, NIS, PAYE, ED Tax, and NHT are taxes which are actually paid in the current month, the deductions / contribution are made the previous month and are taken from that months tax work sheet.
- Accruals equals total accruals paid this month. This amount is taken off the monthly disbursements work sheet. Note accruals is funds collected on behalf and owing to the Collector of Taxes.
- Accruals are then posted from the General Tax Journal to the Accruals account in the General Ledger as a payment, this entry therefore is posted as a credit entry.
- Collector of Taxes, NIS, NHT, PAYE, and ED Tax are then posted to their respective accounts in the General Ledger.

## 5. Purchases/Accounts Payable Journal

- Payments for Farm Supplies for the month is taken from the monthly disbursement work sheet. This total is posted to the Accounts Payable account in the General Ledger as a debit entry.
- Farm supplies purchased on credit for the month is taken from the Purchases / Accounts Payable Journal and is posted to the Accounts Payable account as a credit entry and the Farm Supply Expense account as a credit entry.

## 0. Profit and Loss Statement

The Profit and Loss Statement is prepared on a monthly base. It indicates the businesses financial progress for the accounting period. The profit and loss statement is a useful tool for the board of directors, management, and others in tracking the financial activity of the association. In order for the profit and loss statement to be valid, accuracy must be maintained through out the accounting process.

The Profit and Loss Statement is prepared in the following manner:

1. Add the revenue totals taken from the General Ledger for the month for:

- Wholesale Sales
- Retail Sales
- Office Services
- Truck Rental Income
- Processing
- Any other income generating activity.

Note: use the total sales for the month, including cash sales as well as sales on credit. This total is posted on the right hand side of the Profit and Loss Statement under Sales.

2. Add the General Ledger expenditure totals for:

- Wholesale purchases.
- Retail Purchases
- Farm Supply purchases.

Note: Use the entries for cash and credit purchases to calculate this total. This total is posted as a left hand side on the Profit and Loss Statement under Purchases.

3. Use the Closing Stock entry from the previous month's Profit and Loss Statement as the Opening Stock entry for the current month's statement on the left hand side of the Profit and Loss Statement.

4. Add the total amount of Purchases and Opening Stock.

5. Record the current inventory value, taking the total from the inventory report, post this entry on the left hand side of the Profit and Loss Statement under Closing Stock.
6. Subtract the Closing Stock amount from the total of Opening Stock plus Purchases amount.
7. Record this figure under the right hand column of the Profit and Loss Statement under Sales.
8. Subtract this total (Cost of Goods) from Sales in the credit column. If this is a positive number, it indicates gross profit, if it is a negative number it indicates gross loss.
9. List all other expenses (except items included under the purchases category) incurred during the accounting period on the left hand column under the Expense heading on the Profit and Loss Statement.
10. Subtotal all these expense entries and post the amount on the right hand side of the Profit and Loss Statement.
11. Subtract the Expense subtotal from the Gross Profit / Loss amount, this yields the Net Profit, if it is a positive amount and Net Loss, if it is a negative amount.
12. Using the above procedure, each operation of the business may be examined to determine how productive it is, ie. Wholesale produce sales, Farm supply sales, etc.

Table 4: PROFIT AND LOSS STATEMENT

PURCHASES	E30,654.70	SALES	E62,889.05
ADD OPENING STOCK	+E91,574.58		
	<u>E122,229.28</u>		
LESS CLOSING STOCK	-E65,116.48		
			<u>-E57,889.05</u>
		GROSS PROFIT	<u>E5,776.25</u>
LESS OPERATING EXPENSES			
SALARIES	E4,160.26		
ORGAN. CONTRIBUTE.	E179.28		
P/T LABOR	E812.50		
FUEL	E2,013.80		
UTILITY	E2,042.18		
RENT	E500.00		
SUPPLIES	E224.30		
BANK CHARGES	E179.20		
MANAGER'S FEE	E5,000.00		
TRAVEL	E18.00		
TRUCK PAYMENT	E845.25		
BOARD REIMBURSEMENT	E200.00		
OTHER	E270.00		
			<u>-E16,444.77</u>
		NET LOSS	<u>(E10,668.52)</u>

Table 5: PROFIT AND LOSS BY ACCOUNT

WHOLESALE PRODUCE

PURCHASES	E27,495.55	SALES	E26,286.95
ADD OPEN. STK.			
	<u>E27,495.55</u>		
LESS CLOSE STK			-E27,495.55
		GROSS LOSS	<u>(E1,208.60)</u>

FARM SUPPLY

PURCHASES	E2,529.15	SALES	E29,537.85
ADD OPEN. STK.	E91,574.58		
	<u>E94,103.73</u>		
LESS CLOSE STK	-E65,116.48		-E28,987.25
		GROSS PROFIT	<u>E550.60</u>

RETAIL PRODUCE

PURCHASES	E630.00	SALES	E6,869.25
ADD OPEN STOCK			
	<u>E630.00</u>		
LESS CLOSE STK			E630.00
		GROSS PROFIT	<u>E6,239.25</u>

**Table 6: PROFIT AND LOSS WORK SHEET**

INCOME RETAIL PRODUCE		
BEGINNING INVENTORY	_____	_____
PLUS PURCHASES	_____	
LESS ENDING INVENTORY	_____	
COST OF GOODS SOLD	_____	_____
SALES - COGS = GROSS PROFIT / LOSS		_____
INCOME WHOLESALE PRODUCE		_____
BEGINNING INVENTORY	_____	
PLUS PURCHASES	_____	
LESS ENDING INVENTORY	_____	
= COST OF GOODS SOLD	_____	_____
SALES - COGS = GROSS PROFIT / LOSS		_____
INCOME FARM SUPPLIES		_____
BEGINNING INVENTORY	_____	
PLUS PURCHASES	_____	
LESS ENDING INVENTORY	_____	
= COST OF GOODS SOLD	_____	_____
SALES - COGS = GROSS PROFIT / LOSS		_____
OTHER INCOME		_____
TOTAL GROSS INCOME		_____
LESS EXPENSES		
SALARIES		
PART TIME LABOR	_____	
ALL OTHER EXPENSES	_____	
EXCEPT PURCHASES	_____	
TOTAL EXPENSES	_____	_____
TOTAL GROSS INCOME - EXPENSES =		
NET PROFIT OR (LOSS)		

## P. Farmer Payments

Each week the organization collects produce from farmers to sell through the various marketing arrangement, with which the association does business. When produce is collected it is recorded into delivery books (receival books). These are numbered 1 - 10. Books numbered 1 - 5 are used on week, while numbers 6 - 10 are used the following week. This allows one set of books to be used to accounting procedures while the other is in the field.

A similar arrangement is followed with the wholesale invoice books. The information used in these two sets of books of original entry is used to calculate payments to farmers.

All produce received from members is taken on a consignment basis, they are sold and the association deducts a commission to cover operating costs, and members are then paid. Members are paid once a week, on the Friday, the week after the produce has been delivered.

In order to determine the amount of payment, the amount of produce received is divided by the total selling price of the produce to establish the average sale price per unit of each commodity sold. A commission to cover the business' operating costs is deducted from the average selling price and farmers a paid the remainder.

Once farmer payments have been calculated on a worksheet, proper entries are posted to the cash disbursements journal as well as the accounts payable journal under the farmer's account.

Note: This is on possible system of calculating payments to farmers, other may be devised. It is essential that some system be used to account for shrinkage and the association's operating costs or the business will soon find itself in serious financial difficulty.

Q. Chart of Accounts

Asset Accounts

- 1000 - ASSETS
- 1001 - CASH IN BANK ACCOUNT  
(FROM RECONCILED BANK STATEMENT)
- 1002 - PETTY CASH
- 1004 - DEPOSITS (RENTS, UTILITIES, ETC)
- 1005 - CERTIFICATES OF DEPOSIT
- 1100 - RECEIVABLES
- 1101 - LOANS RECEIVABLE (LOANS TO MEMBERS)
- 1102 - OTHER RECEIVABLES (CREDIT SALES TO CUSTOMERS  
WHICH HAVE NOT BEEN PAID)
- 1200 - INVENTORY
- 1201 - RETAIL STORE (STOCK ON HAND)
- 1202 - FARM SUPPLY (STOCK ON HAND)
- 1203 - WHOLESALE PRODUCE (STOCK ON HAND)
- 1300 - FIXED ASSETS
- 1301 - OFFICE EQUIPMENT
- 1302 - PACKING HOUSE EQUIPMENT
- 1303 - VEHICLES
- 1304 - LAND
- 1305 - BUILDINGS
- 1306 - DEPRECIATION

Liabilities Accounts

- 2000 - LIABILITIES
- 2001 - LOANS PAYABLE
- 2101 - TAXES AND DEDUCTIONS PAYABLE
- 2200 - ACCOUNTS PAYABLE (LIST INDIVIDUALLY BY NAME)
- 2201 - "
- 2202 - "

- 2203 - "
- 2204 - "
- 2205 - "
- 2206 - "
- 2207 - "
- 2208 - "
- 2209 - "
- 2210 - "
- 2301 - MEMBERS SHARES IN THE ASSOCIATION
- 2401 - PROFIT/(LOSS) - for the accounting period,  
month or year.

#### Income Accounts

- 3000 - INCOME
- 3201 - PRODUCE SALES (WHOLESALE)
- 3301 - PRODUCE SALES (RETAIL)
- 3401 - CHEMICAL SALES
- 3402 - FEED SALES
- 3403 - FERTILIZER SALES
- 3404 - SEEDS AND SEEDLING SALES
- 3405 - OTHER FARM SUPPLIES - Tools, drums, boots,  
files, machetes, sprayers, etc.
- 3501 - TRUCK RENTAL - Associations truck hires out.
- 3502 - OTHER EQUIPMENT RENTAL - Sprayer, tractor.
- 3601 - PROCESSING INCOME - Custom packing, other  
forms of processing for a third party.
- 3701 - INTEREST INCOME - Interest earned from savings  
accounts, certificates of deposit, etc.
- 3801 - DONATIONS - Cash and cash equivalent of  
donations from USAID, CAPM, GOS, others.
- 3901 - GAIN / LOSS ON EQUIPMENT SALES
- 3902 - MISC. INCOME

## Expense Accounts

- 4000 - SALARIES - All full time employees.
- 4002 - PART TIME LABOR
- 4003 - EMPLOYEE BENEFITS - Health payments, doctors, medicines.
- 2100 - TAXES AND SALARY DEDUCTIONS - Both organization and individual.
- 1200 - FARMER PRODUCE PAYMENTS - Include cash purchases for wholesale.
- 1201 - RETAIL PRODUCE PURCHASES - Vendors and markets.

Note: - At the end of the month the amount of produce purchased from farmers for sale in the retail operation is deducted from farmers produce payments and posted to retail produce purchases.

- 1301 - CHEMICAL PURCHASES
- 1302 - FEEDS PURCHASES
- 1303 - FERTILIZER PURCHASES
- 1304 - SEEDS AND SEEDLING PURCHASES
- 1305 - OTHER FARM SUPPLIES - Hoes, forks, sprayers, boots, etc.
- 4500 - FARM EQUIPMENT MAINTENANCE
- 4501 - VEHICLE INSURANCE AND LICENSING
- 4502 - VEHICLE MAINTENANCE
- 4503 - FUEL COSTS - Petrol, oil fluids.
- 4505 - TRANSPORTATION COSTS - Transport rental.
- 1100 - OFFICE FURNITURE AND FIXTURES
- 1400 - VEHICLE PURCHASES
- 4603 - OFFICE MAINTENANCE AND REPAIRS
- 4604 - OFFICE RENT
- 4605 - OFFICE SUPPLIES AND STATIONARY
- 4606 - OFFICE UTILITIES - Water, electricity.
- 4607 - STORE SUPPLIES - Light bulbs, toilet paper, pest control, soaps, etc.

- 4608 - PACKING HOUSE RENT
- 4609 - PACKING HOUSE UTILITIES
- 4701 - AUDIT/LEGAL FEES/LICENSES/STAMP DUTY
- 4702 - BANK CHARGES
- 4703 - INTEREST FEES
- 2200 - LOANS - Given by the association.

NOTE: Account categories and codes are set up to facilitate accounting, it allows the various accounts to be easily isolated, assisting in analysis of the business.

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PACKING HOUSE REQUIREMENTS  
SECTION IV

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A. Physical Structure and Location

- Ideally located on or close to a main road to facilitate entrance by larger vehicles and eliminate damage by physical jostling and battering of packaged produce.
- Central location to farmers is desirable to reduce transport time and cost and product damage.
- Smooth concrete floor, (preferably graded to permit water runoff), the floor space should be open and clear of obstructions to allow flexibility in the packing and grading operation, minimum size would be 10 meters x 20 meters, 15-20 meters x 30-40 meters would be better.
- A sturdy high roof to permit the entrance of larger lorries and protect occupants and product also packaging materials and other materials from the elements, zinc coated or aluminum sheeting is adequate for this purpose, optimally the roof design would incorporate a ridge vent and eave or gable vents to minimize heat build up with in the shed, ventilation of some sort could be retro-fitted to an existing structure.
- Running water, phone and electrical service are desirable, although not absolutely necessary, an electrical generator, water tank and alternative communication systems are suggested.
- The building should be enclosed to protect the operation from blowing rain and wind-borne dust also theft. There should be large windows for light and ventilation, these should be barred and shuttered for security and protection from the elements as needed. Doors should be large to allow easy flow of product in and out. There should be at least one garage type or double door to allow large equipment, lorries and palletized merchandise into and out of the pack shed.
- A separate office area for management would be desirable, as would separate, securable storage area for valuable tools and equipment.
- A fenced yard with adequate parking and turning room for anticipated vehicular traffic, ie., large lorries and possibly tractor trailer rigs. The fence would keep out animals and unauthorized persons, thus adding to security and control. A loading dock or ramp is useful to ease loading with the assistance of a pallet jack and hand trucks, (optional).

- Sanitary facilities ie. toilets and wash basins for staff and workers are needed to maintain hygienic conditions in the pack shed. Workers are dealing with food products and sanitation is critical.

## B. Packing Shed Equipment and Material

- A grading and sizing line, a locally available machine suitable for tomatoes, bell peppers, onions, and potatoes was used in the Mkhovu packhouse with good results. It is reportedly reliable and sturdy, reasonably priced, and parts and service would be available locally. This line is available from Ooskard Trekkers, P.O. Box 123, Hankey, R.S.A. 6350, Contact person is Mr. J.G. De Lange.
- A shrink wrap machine for pre-pack operations, this is essential for penetration of many sectors of local and export markets.
- A set of locally fabricated wooden dump trays and packing tables, such as illustrated in Jim Faulkner's report and used successfully by this writer at the St. Catherine's vegetable growers association for a wide range of crops for some 5 years. A set of 4-6 dump trays and packing tables should be adequate, these are usually 4 feet x 8 feet (120 cm x 240 cm) in size based on the dimensions of a standard sheet of marine plywood, and built at such a height to ease labor.
- A set of loading coaster ramps (rollers) with supports to simplify flow of packaged product and the loading of trucks.
- A couple of miscellaneous tables or saw horses and plywood sheets for box building and other odd jobs.
- Scales: Several types would be needed. At least one 100 kg floor model deck type scale, two 25 kg. table top deck type scales, two each portable dial type scales in 25 and 100 kg. sizes for collection. These are useful for collection of product on farm and should include a sling for weighing lug boxes and other odd shaped packages.
- A quantity of pallets for the storage of packing materials, ie. Boxes as well as the storage and movement of packed produce, 25 - 50 pallets should be adequate. These are also good for holding and moving product awaiting grading and packing as they help air flow and avoid heat build up.
- A quantity of plastic lug boxes, (500 - 1000) for the collection and holding of produce in the field before grading and packing. Strict inventory control of this item is important., Inventory control is essential for every physical asset of the pack shed/farmer association.
- Pallet jack, dollies, hand truck (1-2 each) would be very useful

- One floor model stapler, two hand held stapler, and two hand held taping rollers, plus misc indelible markers for marking boxes
- A small back up generator for packing and grading line, also for backup lighting for night time operation
- Misc: This would include a set of hand tools to maintain equipment, a grease gun, oil can, wheel barrow, brooms, rakes, scoop shovel, hoses, a few plastic barrels or steel drums for trash and assorted usage

### C. Office Equipment

- Desks (2), file cabinet, work table, shelving, stand up cabinet, telephone or radio, a small safe, adding machine or calculator with tape, fans(1-2). Optional would be typewriter, computer.
- Stationary such as: receival books, invoice books, sales books, (these should be in triplicate with carbon), a set of journals appropriate to the nature and scope of operations, company stamps as needed, misc pads, notebooks, pens, pencils, paper, staples, tape etc.

Note: this is rough wish list of items that would be good to have at a basic packhouse operation, almost all are optional and would have to be tailored to the anticipated need and financial resources of each operation/farmer organization.

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**MARKET ANALYSIS**  
**SECTION V**

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**A. Background**

Given its wide range of climatic zones and abundant resources, Swaziland is capable of producing a variety of vegetable products on a year round basis. Especially during the winter months, Swaziland's location and climate give producers a comparative advantage in the production of certain horticultural crops. It has long been realized, however that Swaziland's consumer base is inadequate to absorb its capacity for horticultural production and that for the industry to thrive, marketing connections would have to be established with the larger regional markets, particularly in the Republic of South Africa. This section is an attempt to quantify the potential which exists for Swazi products.

**B. Regional Markets**

The Republic of South Africa represents by far the greatest regional market for Swaziland's horticultural production. This is due to relative proximity of Swaziland to large urban areas, 250 km to Johannesburg - Pretoria, 450 km to Durban, excellent road connections to these centers, and Swaziland climatic advantage particularly in the winter months. Three of the four largest regional fresh produce markets, Johannesburg, Pretoria, and Durban, handled in excess of 1,200,000 metric tons of vegetables in the year ending June 1989. This had a value of over R570,000,000.

Using Johannesburg National Fresh Produce Market as a guide, the major commodities traded in order of importance were:

Item	Value	Mass	Av. Price/MT
Potatoes	- R 61,955,000	- 181,000 MT	- R 342.00
Tomatoes	- R 58,384,000	- 84,500 MT	- R 690.00
Onions	- R 13,768,000	- 34,750 MT	- R 396.00
Cabbage	- R 5,071,000	- 37,000 MT	- R 137.00
Carrots	- R 4,726,000	- 14,500 MT	- R 325.00
Beans	- R 4,600,000	- 4,400 MT	- R 1,039.00
Lettuce	- R 4,054,000	- 9,900 MT	- R 409.00
Pumpkin	- R 3,033,000	- 10,133 MT	- R 299.00
Gem squash	- R 2,828,000	- 7,900 MT	- R 357.00
Sweet Potatoes	- R 2,504,000	- 8,740 MT	- R 287.00
Beetroot	- R 2,141,000	- 8,400 MT	- R 253.00
Cauliflower	- R 1,619,000	- 5,300 MT	- R 304.00
Other	- R 35,019,000	- 54,042 MT	- R 648.00

Note: Figures presented are from Johannesburg Fresh Produce Market for the year ending June 1989.

Although, these figures are a bit dated, they do yield some interesting information. Although onions and potatoes are traded in large volumes, Swaziland has little hope of competing in these markets due to several factors. These include a well developed infrastructure for the long term storage of these crops, inability of Swaziland to produce Long Day onion varieties which have good storage potential, and fairly stable low prices on the market. When transportation is taken into account on these bulky items Swaziland is less than competitive in these products. With some of the other major crops, cabbages, beetroot, sweet potatoes, low average prices again makes Swaziland uncompetitive when transportation is considered. With lettuce and cauliflower, relatively low average prices and the need for refrigerated facilities for the handling and transport of these items makes it unlikely that Swazi farmers will readily penetrate these markets.

Two areas, however show good promise for Swazi products, these are tomatoes and the range of other miscellaneous vegetables. It can be seen from the data presented above that these are high value items, with average annual prices in excess of R 600 per metric ton. This will allow Swaziland to be competitive in these lines despite the relatively high price of packaging and transportation from Swaziland. This is particularly true during the winter season when prices tend to be higher than the annual average and the inability of other areas to produce gives Swazi farmers a strong competitive edge. This is also true for pumpkins and gem squash to a certain extent, that during the winter season when higher than average prices and climatic advantage allows Swaziland to be a competitor in the market.

Tomatoes are particularly attractive because they are traded in very large quantities (over 1500 metric tons per week in Johannesburg alone). This volume makes it unlikely that scheduled production and export of tomatoes by CAPM farmers to South Africa would affect market prices, since they would be unlikely to produce even 10 % of the volume of tomato traded on a weekly basis. This large demand for tomatoes also provides Swazi farmers with a volume line around which to base an export program.

The "other" line which includes: green peppers, chilies, sweet corn, butternuts, baby marrows, and others including specialty items, such as baby vegetables, demonstrate favorable average annual prices and become extremely interesting during the winter season when prices rise well above average and climactic conditions again give Swaziland a competitive advantage. These "other" crops share with pumpkins and gem squash, the characteristic that they are traded in relatively small volumes (200 metric tons per week for pumpkins and much less for other products). This low volume makes it difficult for Swaziland to produce and export these crops in volume without negatively affecting the market price. These crops however, do present the possibility for shipping mixed loads to South Africa, particularly during the winter "market window".

Despite the restriction on large volume market potential, these minor crops provide the marketing program an opportunity for diversification and are particularly suited for the smaller

growers, who are incapable of producing large volumes in any event. Some these minor crops are also suited to the smaller grower since they require intensive management.

Discussions with buyers in the various regional markets tend to confirm the above observations. Conversations with agents in Johannesburg, Pretoria, and Durban, indicate good potential for baby marrows, brinjals, butternut squash, chilies, gem squash, green beans, green peppers, pumpkins, sweet corn and tomatoes, during the winter season. The strategy that suggests itself is to ship large volumes of tomatoes with mixed lots of the smaller volume crops to round out the loads.

It must be noted that the feeling among many of the farmers, is that financing for the necessary packaging and transportation is beyond their capability. This might be an area in which the project can assist in small test shipments of mixed loads to commission agents or wholesale buyers. This would demonstrate to the growers the feasibility and profitability of such arrangements, while providing them with documentation to seek the necessary financing from commercial sources. At the same time, they could pursue arrangements with the Indian speculators from Durban for movement of large volumes of tomato. One buyer has indicated that he would be capable of absorbing 2500 20 kg. lug boxes per week each of both salad and plum type tomatoes. This would provide an outlet for large volumes of product, thus relieving some of the pressure from the growers for markets and introducing them to a commercial production and marketing situation. At the same time it would be desirable to pursue alternative arrangements so that in the future the growers would not be dependant on a few market speculators.

### C. Fresh Market Tomato Analysis

In terms of quantity and value, fresh market tomatoes are the second most widely traded vegetable commodity in the Johannesburg National Produce Market. Some 84,554 metric tons of tomatoes, valued at R58,384,890, were sold through the market for the year ending in June 1989. Over the 5 year period from 1984 - 1989, the highest average price was R690.50/MT or R4.42/6.4 kg. box for the year ending June 1989. The lowest average price was R384.07/MT or R2.46/6.4 kg box, for the year ending June 1986. Over the entire five year period, the average price for fresh market tomatoes was R540.87/MT or R3.79/6.4 kg. box.

Clearly, based on the calculated break even price per box of R 5.50, the average yearly price for fresh market tomatoes would not allow the profitable movement of Swazi product into the South African market. This picture, however, changes when the variation in price through out the year is examined. Analysis of price trends within a particular year, indicates that the highest prices tend to occur from May through November. The average price per 6.4 kg. box for this period, in the year ending in June 1989, was R6.44 per box, in the Johannesburg National Produce Market. Similar analysis of fresh market tomato prices, for the Durban and Pretoria Fresh Produce Markets, for the years 1992, and 1993, reveals a similar trend, with the price per box averaging well above R5.50 for the months of May through November.

It should be noted, however, that daily price per box ranged between R3.96 and R13.20 during the period. This wide fluctuation, which is typical of perishable vegetable products, must be considered since it will pose a problem for the proposed farmer marketing organizations, in that an equitable method of payment to growers will have to be derived, to prevent contention among members arising from price differences over relatively short periods of time. It must also be noted that the data available for analysis covers only one to two years, and that even within the period represented, price averages for several months is based on only a few days price information. Therefore, while suggesting trends, the data presented is far from complete and would ideally be drawn from a longer time period, ie: 5 years, for the target markets. It is suggested, that this data be collected and analyzed by the CAPM team, and systems developed to continue orderly and routine analysis and retrieval of market price information for relevant markets. (See attached graphs - Annex 1).

Based on available data and various other reports, there appears to be a market window for Swazi fresh market tomatoes, during the months of May - November in the regional South African produce markets, ie. Durban, Johannesburg, and Pretoria. The daily price per box is volatile but the average price R6.44/ box, over the period May - November is adequate to cover the cost of production and marketing while allowing the producer a reasonable return for his efforts. In addition, to a favorable price analysis for Swazi fresh market tomatoes during the market window in South Africa, the large volume of tomato traded on the South African market, some 1620 MT per week in the Johannesburg market alone, makes it unlikely that the quantities of tomatoes available from Swaziland will impact on tomato prices in the major South African markets.

The production planned by the CAPM project farmers will be in the range of 40 - 60 MT per week. This will be far below a 10 percent market share, therefore it is unlikely that this volume will affect market prices by causing sudden gluts of supply in the market place. This would be particularly true if the projected tomato production is traded in two or three of the top South African markets.

**Table 7: FRESH MARKET TOMATO-JOHANNESBURG**

PRODUCTION COST/BOX (BASED ON 24 MT/HA)	E0.98	E1.19
TRANSPORT - FIELD/PACKHOUSE	E0.25	
BOX - 6,4 KG	E1.94	
<u>LABOR</u>	<u>E0.05</u>	<u>E0.10</u>
SUBTOTAL	E3.22	E3.48
ASSOCIATION'S OPERATING FEE 15%	.48	.75
<u>TRANSPORT-PACKHOUSE/J' BURG</u>	<u>.75</u>	<u>.85</u>
SUBTOTAL	E4.45	E5.08
MARKET PRICE TO BREAK EVEN	R5.10	R5.85

NOTE: Using the cost figures above it will be necessary for a sales price of approximately R5.10 And R6.85 To accommodate the 12.5% commission for the commission broker in Johannesburg. It is also important to note that using these numbers, the return to the farmer will be only his cost of production or E0.14-E0.17/kg.

**Table 8: ANALYSIS OF MARKET PRICE TO GROWERS NET RETURN**

MARKET PRICE R/6.4 KG BOX	NET RETURN TO GROWER	
	E/6.4 KG BOX	E/KG
R5.25	E0.00/BOX	E0.00/KG
R5.30	E0.04/BOX	>E0.01/KG
R5.40	E0.13/BOX	E0.02/KG
R5.50	E0.21/BOX	E0.03/KG
R5.75	E0.43/BOX	E0.06/KG
R6.00	E0.65/BOX	E0.09/KG
R6.25	E0.87/BOX	E0.12/KG
R6.50	E1.08/BOX	E0.15/KG
R6.75	E1.30/BOX	E0.18/KG
R7.00	E1.52/BOX	E0.22/KG
R7.25	E1.74/BOX	E0.24/KG
R7.50	E1.96/BOX	E0.28/KG
R7.75	E2.18/BOX	E0.31/KG
R8.00	E2.40/BOX	E0.34/KG
R10.00	E4.15/BOX	E0.59/KG
R12.50	E6.34/BOX	E0.90/KG
R15.00	E8.52/BOX	E1.22/KG

NOTE: Net return is calculated by subtracting agents commission (12.5 percent) and fixed cost of landing box in market.

Table 9: MAIN VEGETABLE CROPS CONSIGNED THROUGH NAMBOARD-1992

CROP	TOTAL VOLUME	SWAZI ORIGIN (by percent)
POTATOES	4,876 MT	12.6%
ONIONS	2,300 MT	1.0%
CABBAGES	1,785 MT	45.7%
TOMATOES	334 MT	7.7%
CARROTS	278 MT	2.3%
BEETROOT	152 MT	0.9%
BUTTERNUTS	90 MT	4.0%
CAULIFLOWER	67 MT	>.1%
LETTUCE	50 MT	1.4%
PUMPKINS	48 MT	1.8%
S. POTATOES	29 MT	0.0%
BEANS	25 MT	1.0%
OTHER VEGETABLES	131 MT	2.9%

\* Information presented above is from Nokwane Market,  
data supplied by NAMBOARD

#### D. Green Peppers

A brief look at green peppers confirms many of the statements presented above, (See graphs Annex 1), while there appears to be rise in prices over the winter months, indicating a market window, price movement within and between years is extremely volatile indicative of a low volume item that is easily subject to variations in price due to fluctuations in production volume. Attempts to make this crop a major component of an export program could be disastrous.

#### E. Local Market Prospects for Vegetables

Data supplied by NAMBOARD indicates that for the top 12 crops traded in 1992, Swazi farmers produced less than 50 percent of any particular crop traded. This situation becomes even more dramatic, when it is realized that for 10 of the 12 crops less than 10 percent of the volume traded was produced locally, and for over half the vegetables listed only 1-2 percent of the total traded was derived from local production. It would seem that this situation would present the opportunity for an increase in vegetable production for local consumption, particularly for smaller growers, who would be better suited to produce the limited quantities that the local market requires.

When one examines onions, the second most traded vegetable crop on the local market, with a volume of some 2,300 metric tons sold at the Nokwane Market in 1992, there seems to be no reason why a much greater local production should not be encouraged. Over the 5 year period, from 1989 - 1992, the lowest price reported for this item was around E4.50 per 10 kg pocket. The price averaged between E6 -8.00 per pocket and in 1992 reached prices of over E12.00 per pocket for several months in the winter season. When market price is contrasted with the cost of production of around E3.00/pocket delivered to market, there is no period during the last 5 years that local onion production would not have been profitable.

Although a detailed price versus cost analysis over time has not been done for the other major crops on the local market, the figures presented above indicate an opportunity for Swazi vegetable growers to achieve a greater share of the local market. With all the major locally traded items, except cabbage, local growers supply only between 0 - 12 percent of the crops consumed in Swaziland. Even with cabbage, they still do not produce 50 percent of the quantity consumed.

Given the reluctance that local traders have to sever their ties with their South African suppliers, it may be necessary for growers to approach NAMBOARD with a detailed plan of action, so that steps may be taken to limit onion and other imports into Swaziland. Growers themselves may also take actions which improve their competitive on the local market. Programmed production to assure buyers of consistent supply and to avoid periodic gluts and shortages is one necessary measure.

Consistent availability, combined with centralized assembly of a select range of products at an easily accessible packing shed will serve to attract vendors and traders, as well as institutional buyers. Realization that the Swazi consumer and local market is more sophisticated than it is given credit for, should lead growers to strive for higher, more uniform quality standards. This knowledge would also suggest improvements in packaging and standard packs. The local supermarket industry and even the local town vegetable markets seems to be moving toward pre - packs of a wide range of vegetable products growers would be wise to take note and provide this service in attempting to achieve greater penetration and acceptance on the local market.

Another area where growers must become more aware is in their costs of production. All too often, growers are heard grumbling about local prices, when upon analysis they are making 50 -100 per cent above production costs at the perceived low price. Cost of production versus price awareness would permit growers to devote more time to productive activities than expending energy on things that they can not influence greatly and are not actually too bad if considered rationally. Continued training efforts in this area are recommended.

Development and increased penetration of the local market for Swazi vegetable products would also tie in with an export thrust in the misc. crop line since it would allow greater flexibility in marketing by allowing movement of product between the two markets as conditions dictate.

#### F. Summary

In order for Swazi vegetable farmers to become commercial vegetable producers, they must expand their penetration and share of both local and regional markets. Led by South Africa, both markets are increasingly sophisticated and require a consistent supply of high quality vegetables. In regional markets, Swaziland's competitive advantage appears to be in winter production of tomatoes and a wide range miscellaneous crops. Tomatoes will provide a high volume line to lead the export program, with mixed lots of misc. crops (green peppers, sweet corn, butternuts, pumpkins, etc.) filling the loads. Exploration of ways to reduce transportation and packaging costs will increase Swaziland's competitive position in the regional markets. Backhaul arrangements and bulk importation of lower cost packaging materials are possibilities.

Development of regional markets needs to be tied to increased penetration and market share of local market possibilities. This strategy will reduce risk by giving greater flexibility to a marketing program and reducing dependency on one crop or market. This approach will also provide greater year round through put for a pack shed operation and provide a wider, more stable economic base to a farmer's organization.

Success in both local and regional markets is dependent on consistent production of high quality products, attractively packaged according to market dictates. The initial program will probably rely heavily on marketing arrangements with Indian

speculators, with alternative arrangements in regional centers being explored with project assistance. Programmed production and expansion in local markets will be explored simultaneously. Since marketing arrangements will be dependent on the organization and formation of functional farmer groups a great deal of emphasis must be placed on the timely organization and training of farmers to prepare them for the task ahead.

**RSA MARKET TOUR CONTACTS  
SECTION VI**

**A. DURBAN MARKET CONTACTS**

NAME/COMPANY	ADDRESS	TELEPHONE/FAX
Baby Raman	31 Acorn St. (between Warwick and Cannongate) Durban	(0731) 217-890 Work 332-981 Home
Inder Singh VEGRITE/COUNTRY FRESH	90 Pine St. Clairwood	453-948 Work 262-7513 Home 456-682 Fax
Jan Wentzel Deon Meintjes Johan Verreyne JOHN BELL & KIE CO.	P.O. BOX 12214 Durban	465-3134/8 Work 474-244 Home 455-817
Jay Maharaj H.L. MAHARAJ FRESH PRODUCE	64 Flower Road Clairwood	454-920 Market 455-121 Whouse 839-969 Home
Flippie Zwart MODEL MARKET AGENTS	P.O. Box 2136 Durban	465-1411 Work 466-2492 Home 465-1419 Fax
G.A. Boud A.S.J. Dupreez ASSOCIATED AGENCIES	81 Flower Road Clairwood	451-313 Work 752-833 Home
Jay Sookoo WEST COAST PRODUCE	48 Dayle Road Clairwood	
Evan Amial GATEWAY		510-060
B.L. Boodhoo & Sons Suren Bisnath		465-6550 465-3948
Dan Govender		335-424
Peter & Kie Co.		453-032/6

**B. JOHANNESBURG MARKET CONTACTS**

NAME/COMPANY	ADDRESS	TELEPHONE/FAX
Vito Rugani-Exec. Dir. MARCO KOOPERATIEF BEPERK	P.O. Box 86037 City Deep 2049	
Linda Englebee-Transport Duncan Cato- Man. Dir. Bill Kerr  Schoeman (Mkt Agent)  Michaels (Mkt Agent)  JOHANNESBURG NATIONAL FRESH PRODUCE MARKET (Hall #2)	City Deep Johannesburg 2001	613-6981 613-8803 613-7004 Fax  613-5762 678-0941 613-4144/6
MARCO-MARKET AGRICULTURAL REQUISITES	P.O. Box 86098 City Deep 2049	
W.L. Ochse		613-2231

**PRETORIA MARKET CONTACTS**

NAME/COMPANY	ADDRESS	TELEPHONE/FAX
Joe Vermeullen R. GASTALDI CO.	Stall 8, 9, 10 Pretoria Market D.F. Malan Dr. W. Pretoria	(0712) 286-408/9
Ludwig van Dwenter PRINSLOO & VENTOR	P.O. Box 361 Pretoria, 0001	326-3611
N.A.K.		215-370/1
Protea		268-821/8
Jakaranda		326-4296
W.L. Ochse WEBB & PRETORIUS		326-2461 326-2462 Fax
Subtropico		326-9161 321-5203 Fax

ANNEX A

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MARKET EXPLORATION TOUR, JAN 17-19, 1994  
PRETORIA, JOHANNESBURT, DURBAN

## ANNEX A

### Market Exploration Tour - January 17 -19, 1994 Pretoria, Johannesburg, Durban - RSA

On January 17-19, 1994 an exploratory tour of the Pretoria, Johannesburg, and Durban National Fresh Produce Markets was sponsored by the CAPM project to introduce farmer organization representatives to these important regional markets. Four farmer representatives were chosen by their respective groups to go on the trip. These were: Simon Mhlabane, chairman of the Mkhovu Packhouse Association, located in the Northern Hhohho District, Patrick Dlamini, Chairman of the newly forming Siphofaneni Vegetable Growers Association, Vincent Mamba, representing the farmers of the Sithobela area, and Solomon Magagula, Chairman of the Vuvulane Irrigated Farmers Association. The CAPM team was represented by Timothy Dlamini, Doyle Grenoble, Gene Mc Avoy, and Dumile Sithole.

The justification for the trip was several fold:

- To expose farmers to the different vegetable products, which could be produced in Swaziland, being traded on the various markets,
- To introduce farmers to the standards of quality and packaging required to be competitive in the South African regional markets,
- To explore the various forms of marketing arrangements that commonly exist in the fresh produce trade,
- To introduce farmers to several of the buyers operating in the markets visited, and
- Most importantly, to involve the farmers from the onset, in the entire decision making process, by examining the pros and cons of the possible ways of penetrating the local and regional markets.

In Pretoria, the group walked the floor of the fresh produce market and were able to observe the different vegetable crops being traded. The diversity of produce seen literally covered the alphabet from A - Z. Important items with good potential for Swazi growers included: baby marrows (zucchini, yellow crook-neck and similar summer squashes), brinjals (eggplants), butternut squash, chili peppers, cucumbers, garlic, gem (acorn) squash, green beans, green peppers, hubbard and marrow squashes (winter squashes), pumpkins (winter squashes), sweet corn, and tomatoes (both salad and plum types). Fruits with potential include: mango, papaya, and strawberry. In addition, to the diversity and relative volumes of produce traded on the floor, it was also possible to observe the quality, packaging and presentation of produce necessary to be competitive in the market.

While in Pretoria, the group met with Mr. Joe Vermeullen, of Gastaldi Brothers, a wholesale buyer which operates in the Pretoria National Fresh Produce Market and also on the floor of the Johannesburg (City Deep) National Fresh Produce Market and

the Swaziland Fresh Produce Market at Nokwane. Mr. Vermuellen expressed interest in working with Swazi farmers, particularly in the winter months. He indicated several items of interest and the relative amounts that his firm traded on a weekly basis. These included baby marrows (300 boxes/week), brinjals (100 pockets/week), butternuts (500 pockets/week), cucumbers (200 pockets/week), gem squash, green beans (300 boxes/week), green peppers (500 boxes/week), tomatoes (both salad and plum), and sweet corn (500 boxes/week). He expressed the importance of quality, packaging, and uniformity, in order to be competitive in the market.

Mr. Vermuellen explained that Gastaldi purchased the produce from the growers, unlike a commission agent, who merely brokers the produce for a percentage of sale price. He indicated that he would require extension of approximately a week's credit, before payment was made for produce delivered. It was suggested that prepackaging of produce into consumer packs ready for delivery to retail operations was of great interest in the industry and was a possible way for farmers to gain a competitive edge in the market. Mr. Vermuellen indicated that negotiations for any sales in Swaziland would have to be discussed with the Gastaldi Brothers operation at Nokwane Market.

In Johannesburg, the group visited the Johannesburg (City Deep) National Fresh Produce Market, the largest regional produce market in the Republic of South Africa, with Pretoria, ranking second and Durban, being the third largest. Once again, the farmers had the opportunity to walk the floor and observe the different types and quantities of produce being traded, as well as the quality, packaging, and presentation of the various vegetable lines. It was quite impressive to see the range in quality and packaging and note the fact that inferior goods were rotting on the floor for lack of buyers.

At the Johannesburg market, the group had the opportunity to visit Marco Co-op Limited, the largest vegetable producer's cooperative operating in South Africa. Marco, has approximately 600 members and occupies a large portion of one of the six vast halls which comprise the Johannesburg Fresh Produce Market. In addition, to acting as a market agent on behalf of it's members and any other farmer who wishes to consign his produce with Marco, the coop is active in brokering transport arrangements and supplying agricultural inputs. The visit provided a vivid example of what farmers could achieve by organizing themselves in a cooperative manner. At Marco, the group met with Mr. Bill Kerr, technical advisor on the agricultural inputs operation and Mr. Vito Rugani, Chairman of the Board of Directors, and Executive Director.

Mr. Kerr, former field trial director of Mayford Seeds, explained to the group that marketing begins in the field and that a good knowledge of plants was essential in producing the yields and quality required to be competitive in the market. He briefly discussed some of the better varieties of vegetable crops and led the group on a tour of Marco's agricultural supply warehouse indicating the various items available. In ending Mr. Kerr, emphasize to the farmers, the fact that buyers and consumers buy by sight and that visual appearance, packaging, and presentation were key to successful marketing of vegetables.

Vito Rugani, explained how Marco came into existence through the cooperative effort of vegetable growers who sought to improve their competitive advantage in the industry. He made several points to the farmers:

- Centralized packing operations is vital in ensuring a consistently, uniform high quality product.
- The organization would only be successful if it had the loyal support of it's members, and this could only be assured by the organization providing its members with better service and prices than other marketing entities.
- Marketing costs money and that the farmers must be prepared to pay for desired services.
- The need for consistency and quality to gain market recognition.

Mr. Rugani went on to explain that the market was changing and becoming more competitive. with the increasing education and level of skill of growers. He indicated that market windows quickly opened and closed and that successful farmers had to be prepared to be on the market over the long run and not try for a quick buck, and they must adapt to changing market conditions and consumer tastes. Questions from the group were solicited. Mr Rugani wished the group well in their endeavors and closed by indicating he could be available to come to Swaziland and assist the farmers in their efforts.

The visit to Johannesburg ended with visits to Woolworth's and Hyperrama's fresh produce department. Here the farmers were able to see the final stage of the marketing process, retail sale to the consumer. They were able to see and compare the different vegetable products, quality standards, presentation, and various packaging techniques. The baby vegetable line at Woolworth's met with great interest, as did some of the more unusual and exotic items.

On the third day the group travelled to the Durban Fresh Produce Market, where the observations made earlier in the trip were again reemphasized, ie. the need to achieve markets standards, the importance of quality and presentation. Here the group visited the trading floor and had meetings with representatives of the Model Agency, and John Bell and Kie Co. Both of these companies operate as commission agents on a consignment basis. The representatives did a good job of explaining their method of doing business.

Like all other commission brokers operating in the various national produce markets, they operate on a 12 1/2 percent commission, of which 7 1/2 percent goes to the agent and 5 percent to the market. The day after the produce is sold, which usually takes a day or two, payments to the growers are calculated and checks drawn. These are posted Mondays, Wednesdays, and Fridays or may be deposited by electronic transfer to the suppliers account. Payment for all consignment transactions which occur in the market are guaranteed by the market. Model Agency indicated that provisions could be made for cash purchases of produce, with payments being made weekly.

The group was given indications of the types and volumes of produce which could be handled. Both agencies stressed the need for quality and consistency, and both indicated they would be able to assist in the procurement of packaging material and transportation.

The last visit of the tour was with Suren Bisnath of B. L. Boodhoo and Sons, an Indian speculator, who operates near the market in the Durban suburb of Clairwood. Some of the local marketing firms, which were included in the CAPM project, have done business with Boodhoo and Sons in previous seasons under the CAPM project. Like all market speculators, Boodhoo buys from the farmers on a cash basis. Unlike many others this firm renders payment in the form of a bank guaranteed check on the time of pick up of the product. Post harvest handling of the product entails rudimentary grading and minimal bulk packing into lug boxes.

The arrangement is attractive to the farmers since they have little financial outlay in the marketing of the crop and the buyer assumes most of the risk. Discussions with Mr. Bisnath centered mainly around ways of improving the previous year's operations and expanding the number and volume of crops handled by B. L. Boodhoo and Sons. Mr. Bisnath expressed interest in obtaining 2500 lug boxes per week of both salad and jam type tomatoes, as well as, expanding into sweet peppers, butternut squash, and possibly garlic and chili peppers. He also stressed the need for centralized collection points and improved grading and quality control. It was also indicated that there might be the possibility of assisting the farmers with an older lorry for the collection of vegetables from the farm.

The tour was quite successful in meeting the objectives laid out. While many of the observations were predictable to someone experienced in the vegetable industry, the tour allowed the farmers to witness first hand many of the concepts the project has been attempting to instill in them. There is a tremendous demand for a wide range of vegetable products in the regional markets in and around Swaziland. High quality, proper packaging and consistency needed to be competitive on the market. The ultimate consumer purchases produce based on visual appeal and guided by this the market sets the standards required for vegetable products to be profitably marketed.

The group was able to speak with and compare the advantages and disadvantages of the different market agents; the wholesale buyer, the commission agent, and the speculative middleman. The movement of produce was tracked through the marketing process to the point of retail sale. Many of the buyers indicated that one of the major obstacles to marketing produce from Swaziland in the South African regional markets would be transport, some offered assistance in this regard, while others suggested that the farmers attempt to identify possibilities for back haul arrangements with empty trucks returning to South Africa.

Discussions with the group on return to Swaziland, revealed that they saw tremendous possibilities for large volume sale of Swazi produce, if they produced high quality vegetables. graded and packaged them properly to ensure a consistent, quality package with good visual appeal, and arranged for transport to

target markets. Several members expressed reservation about their organization's financial ability to secure adequate packaging and transportation. They felt that they would have to rely heavily on speculators initially. Since with this marketing arrangement, the buyer would purchase the product in bulk in Swaziland, would arrange his own transport, and assume most of the risk, thus limiting the farmers exposure.

The CAPM team discussed the possibility of assisting the farmer's organizations with test shipments to wholesale and commission agents in the regional markets. This would consist of pick - up truck size loads of a small range of items, properly graded and packaged, to test the feasibility of using this other market channels in the future. It would also begin to expose the growers to the potential advantages and disadvantages of alternative marketing arrangements in a low cost - low risk manner.

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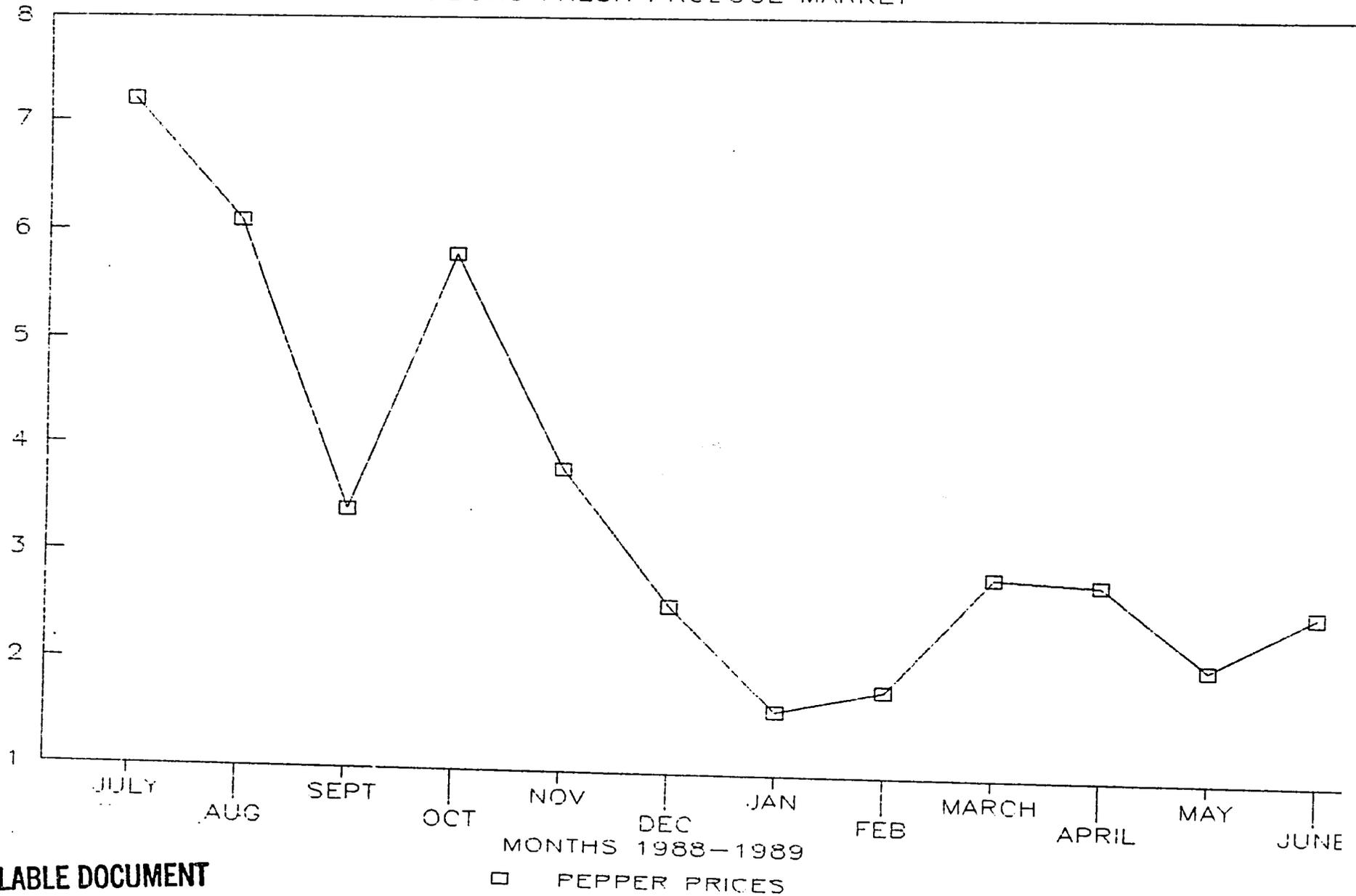
ANNEX B

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PEPPERS AND TOMATO PRICES - GRAPHS

# GREEN PEPPER PRICES 1988-1989

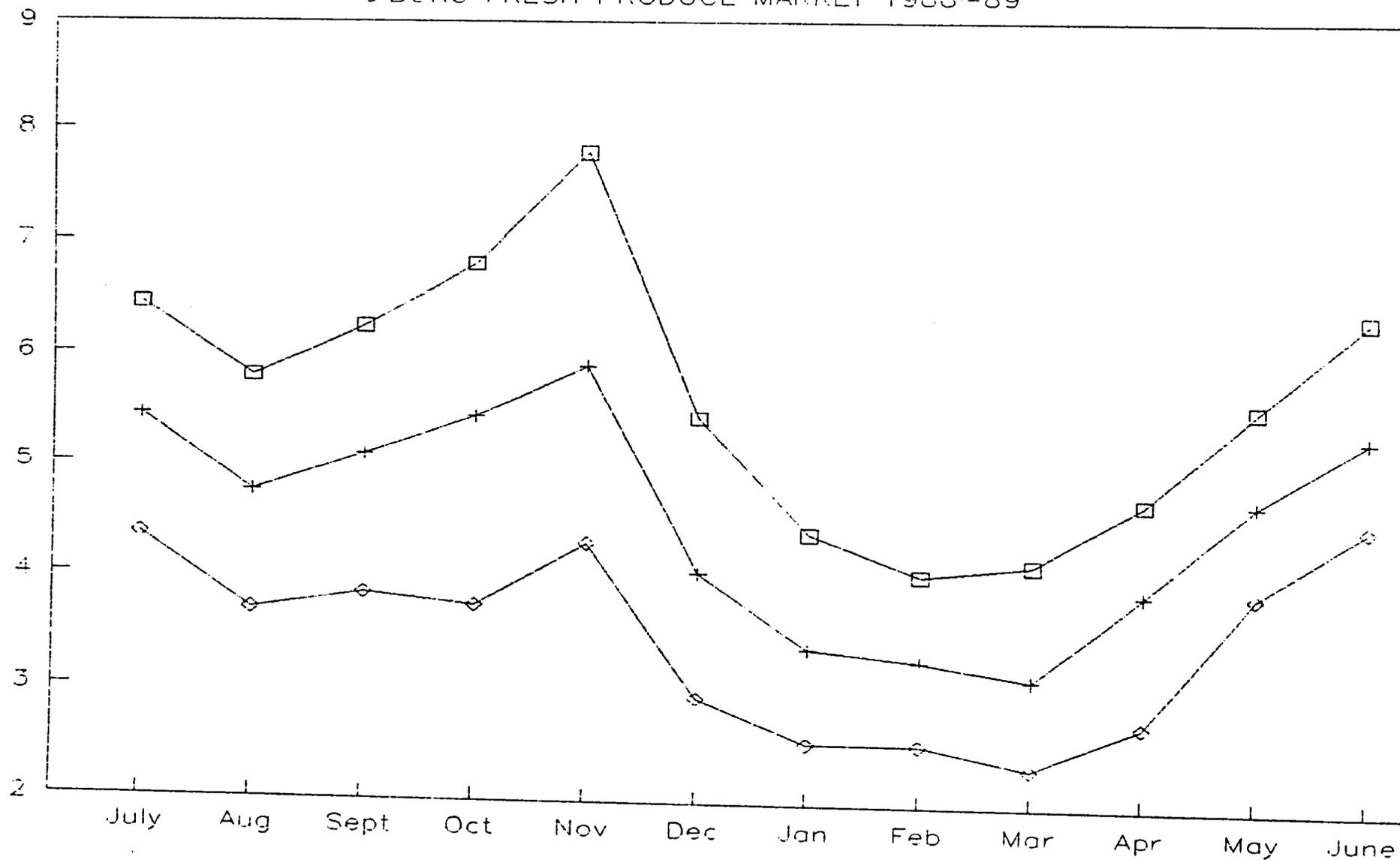
J'BURG FRESH PRODUCE MARKET



BEST AVAILABLE DOCUMENT

# FRESH MARKET TOMATOES

J'BURG FRESH PRODUCE MARKET 1988-89

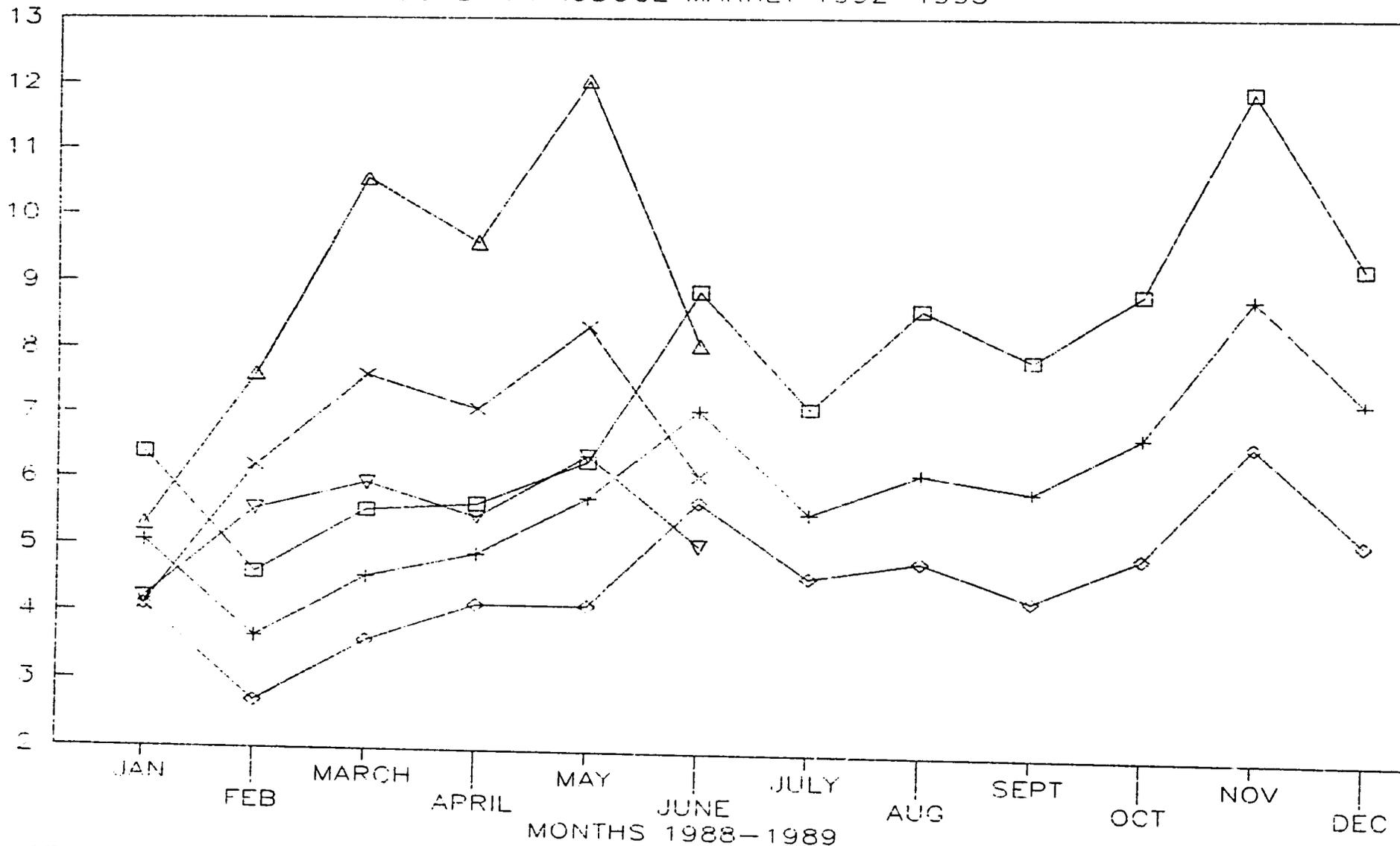


ST AVAILABLE DOCUMENT

□ GRADE 1    + GRADE 2    ◇ GRADE 3

# FRESH MARKET TOMATOES

DURBAN PRODUCE MARKET 1992--1993



□ GRADE 1-1993

+ GRADE 2-1993

◇ GRADE 3-1993

Δ GRADE 1-1992

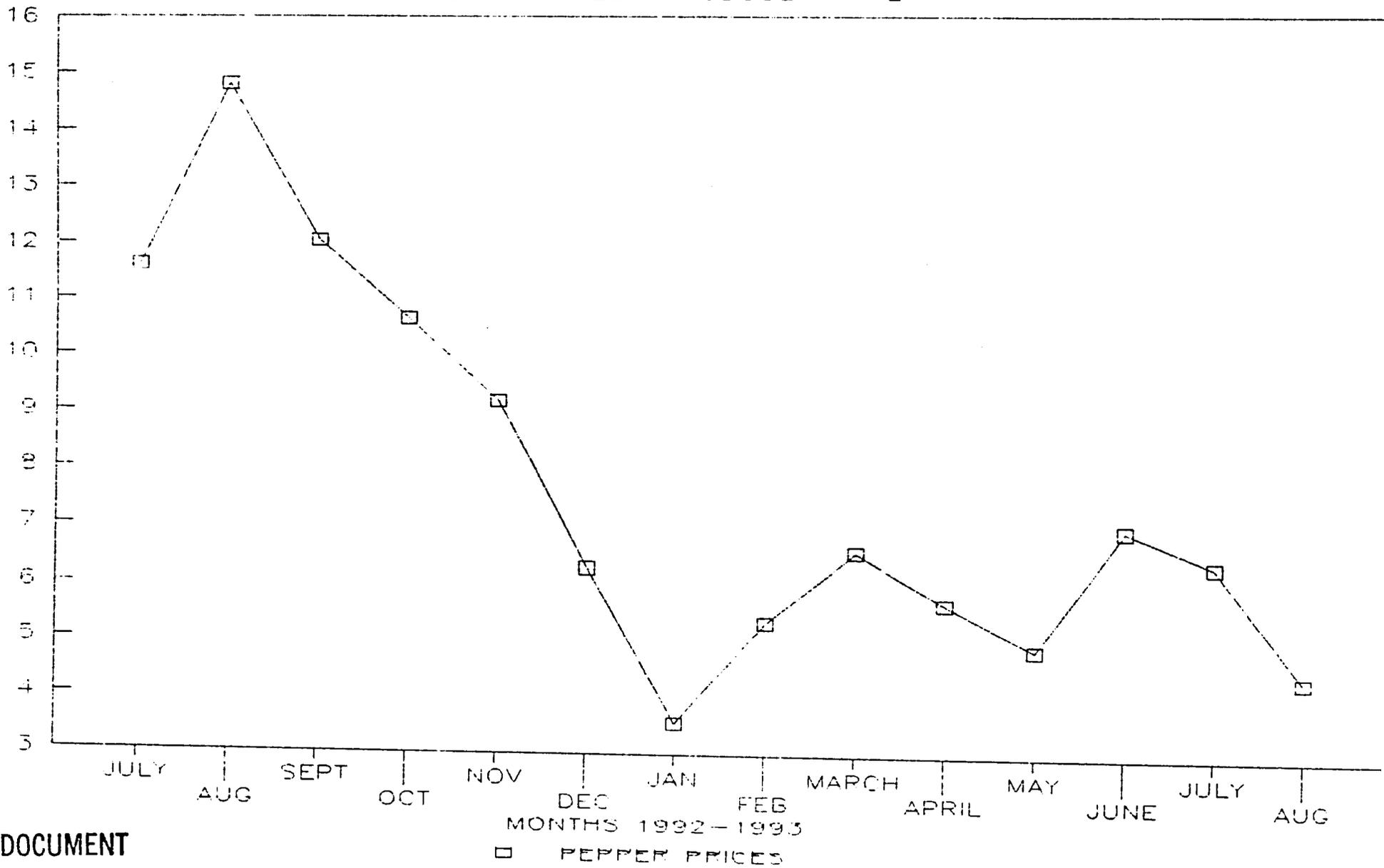
x GRADE 2-1992

▽ GRADE 3-1992

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