MARKETING OF AGRICULTURAL PRODUCE WITH PARTICULAR REFERENCE TO VEGETABLES: THE CASE OF SMALL-SCALE FARMERS IN THE NORTHERN PROVINCE.

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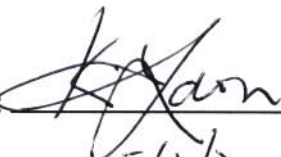
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DECLARATION

I declare that the dissertation hereby submitted to the University of the North for the degree of Masters of Agriculture (Admin) has not previously been submitted by me for the degree at this or any other University, that it is my own work in design and in execution, and that all material contained therein has been duly acknowledged.

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CHAPTER 1

INTRODUCTION

1.1   BACKGROUND

Today we take for granted the way in which our food is marketed. Fruits, vegetables, grains, and beef all rely on marketing institutions that influence and shape our food markets. The true drama, rivaling any Shakespearean play, underlies the legislation of these marketing institutions. In the late 1800's, human nature showed its worst side, with cheating, lying and fraud in everyday transactions. The modern economist would claim that undisclosed information made these actions possible, while drama writers would claim that human nature, and man's never-ending struggle with greed and avarice, created the need for government-sponsored marketing institutions (Dimitri, 1999).

Market exchange before 1850 was fairly simple. People who sold goods knew the people who bought the goods, and this face-to face relationship kept both buyers and sellers honest. People could produce their own goods and services and could choose not to buy or sell when terms were unfavorable. In addition, buyers directly examined the quality of goods offered for sale. In the second half of the century, technological advances brought interior plumbing, canned foods, gas heating, and other innovations, often with unobservable quality. Economic specialization

dominated this period, making consumers and producers increasingly dependent on the market. Technology touched agriculture in many ways, starting with mechanization in 1870. In the first phase, plowing and grain harvesting used horse-driven technology. After 1910, farmers adopted gasoline tractors, and shortly thereafter electric motors provided power for pumping irrigation. These innovations transformed production of grain and speciality crops, and helped increase both acreage and yields.

Technology had a similar impact on marketing, as the transcontinental railroad made it possible to ship agricultural commodities over long distances. Innovation spurred changes in the way agricultural commodities were bought and sold. Transactions that once took place between people who knew each other were now impersonal and anonymous, leaving room for fraud, deceit, corruption and greed, with no recourse for dishonest actions. Quality standards simplified transactions, reduced fraud, and ultimately raised the quality of the goods traded in the market (Dimitri, 1999).

According to Johnson (1982) economic development is important to raise farming output but equally so to develop marketing so that the extra production reaches consumers efficiently. In a competitive economy, greater marketing efficiency will not only give farmers higher prices but also give consumers lower ones and thus expand their buying power. It is often hard for people trained in production to see that the marketing function dictates production policy, which must be firmly based on market potential. Market conditions basically influence production so much that production and marketing are often best regarded as an integrated whole. Finance, production and marketing form a trinity of interests. Neither can be truly effective without a right

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balance of the other two. Good marketing facilities are especially important for peasants with smallholdings and only small surpluses over their subsistence needs for sale.

The small scale of their individual activities tends to raise input prices and lower product prices. Economies of size seem to be more common in market-related activities than in production-related ones. A market structure exists in which, as both seller and input buyer, an individual farmer is a price taker with no power, by himself, to affect the market price. It is often time-consuming for small farmers to take their surpluses to a market place, so often a middleman, storekeeper or itinerant trader buys from many farmers and sells to a marketing organisation or directly to consumers. For export products, there are often several "middlemen". Farmers often complain that the distributive margin between the prices they receive and those consumers pay is too high.

According to Dimitri (1999) prior to 1890, farmers grew and sold fruit to nearby retailers, who sold it to nearby consumers. Refrigerated railcars made long distance trade in fresh fruits and vegetables technically feasible in 1887, but only later did it become economically feasible. By 1930, however, most fruit was grown in the Pacific region and was shipped by rail to consumers in midwestern cities. Between 1890 and 1930, the long distances between sellers and buyers and fruit's perishable nature prevented smooth transcontinental transactions. Buyers and sellers frequently accuse one another of cheating and lying. It was not uncommon for a wholesaler to suspect that the grower had cheated him by shipping inferior instead of the claimed high-quality fruit. For example, some apples were unsuitable for eating. Other padded the barrel interior with pumpkins and turnips.

The concept of small-scale agriculture in South Africa is laden with subjectivity and has been associated with non-productive and non-commercially viable agriculture. In recent years, some effort has been made to find a socio-economically accurate definition of a small-scale farmer that is relevant to South Africa. One of the encouraging developments in recent years has been the growth in support for home gardens, where small plots of vegetables in particular, can contribute significantly to both livelihoods and nutritional standards (Ministry of Agriculture and Land Affairs, 1998).

According to Shaffer and Wen (1994), most of the people in Sub-Saharan Africa live in rural areas and most rural residents are members of households engaged in semi-subsistence agriculture. The majority of smallholders hold land under customary systems of tenure. With limited resources, agricultural output is often inadequate to meet the food needs of households. There are also few households that are completely self-sufficient food producers, although unreliable food markets discourage specialization and dependence on markets (Shaffer and Wen, 1994).

The major concern in South Africa is how to promote participation of previously excluded farmers in the agricultural economy (Makhura et al, 1997). Marketing occupies a critical role in respect of development of (less developed) growth areas. It is in itself in every one of these areas of the least developed, the most backward part of the economic system (Madikizela and Groenewald, 1998)

In subsistence agriculture, there was no need in the past for providing market facilities as output was mostly consumed on the farm. Farmers may be urged to increase the

production of crops and/ or animals, but if there is no market for these, this effort will turn out to be a fruitless exercise. It is known that there are cases where good extension services were provided and farmers had a good crop as a result, but because there is no market for these products, these products were left to rot on the fields (Ramabulana 1993).

According to Francis, *et al* (1997) farmers experience problems when marketing their products to the Fresh Produce Markets. Prices offered are very low compared with the price demanded for fertilizers by the co-operatives. Farmers' attitudes to traders are characterized by considerable suspicion and distrust, fed by experience of late purchases and later payments and of fraud by purchasers. They leave the area without paying farmers for the produce, which they have collected. Lack of markets had in some cases lead to a reversion to bartering. Farmers also lack adequate market information (Francis *et al* 1997).

Substantial proportions of produce from the farm are either for own consumption or sold to the local communities. Small-scale farmers are largely precluded from using of the most profitable channel, like direct sales to supermarkets. This is mainly the result of lack of management skills as well as the fact that very small quantities are produced (Van Reenen, 1998).

The main markets for small-scale farmers are the rural areas surrounding their farm smallholdings. Generally produce fetches higher on local markets than offered by formal markets. Problems do arise when producers attempt to market large amounts of fresh produce at once, as may be the case on irrigation schemes. In most cases use is

made of hawkers who visit the scheme and transport produce to the markets. Strengthening of these informal marketing systems may absorb future increases in production (Monde, *et al*, 1997).

However, marketing is an expensive, productive activity accounting for about one-sixth of the nation's employment and gross business activity. The biological timing of farm output is also an important characteristic affecting marketing (Rhodes, 1987). Small scale farmers do very little value-adding to their produce- mostly limited to packing in bags as required by the market agents in the case of fresh produce destined for the National Fresh Produce Markets (Van Reenen, 1998).

1.2 Motivation

Most agricultural products in the regions are to a greater extent, substitutes for one another and demonstrate positive cost-price elasticities of demand. However, for individual household two products might act as either complements, or substitutes depending on the manner of their use.

Ga-Thaba and Ga-Mashashane in the Central Region of Northern Province in South Africa are regarded as the most maize producing areas whilst Phalala in the Western Region produces a lot of jugobeans. These products complement each other for the famous foodstuff known as *dikgobe or tshidzimba* (Department of Agriculture, 1997).

In the Northern Region, maize and groundnuts are in abundance, but cannot be all marketed due to local market overflow. Tomatoes at Hlaneki, Maswanganyi, Bode, and Dzingidzingi in the Lowveld Region are produced in large quantities that so surpluses are left to rot in the fields. The demographic and geographic features of all the regions necessitate aspects like climate, social life and culture to be considered for products being planted, hence this has a serious impact on quantity and marketing of such products.

In these regions sorghum is a supplement of maize during the period of drought. There is also a myth that farmers do not have sufficient market in the Province. According to the surveys conducted by the Sub-Directorate: Agricultural Economics and the Marketing, most of what is produced in the province is sold outside the province. Those sold within the province are mostly from farmers who produce in minute quantities or those able to exploit market opportunities

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within the province (Department of Agriculture, 1996).

1.2 Aims and objective of study

The objectives of the study are:

To identify the existing local markets for vegetables in the Province;

To investigate the marketing practices of small-scale farmers in particular reference to vegetables in the selected districts of the Northern Province.

CHAPTER 2

LITERATURE REVIEW

2.1 Market liberalization in South Africa

South Africa has in the nineties followed an accelerating process of liberalisation of its agricultural markets. This process of deregulation was initiated by the previous minister of Agriculture, in the early eighties.

These initial steps were followed in the nineties by a growing debate on statutory marketing in agriculture, which was enthused by the reports of Kassier Committee and of the Agricultural Marketing Policy Evaluation Committee which were appointed by Minister Kraai Van Niekerk. While these documents and the draft marketing of Agricultural Products Bill have been widely and critically debated, they represent milestones in the tone and direction of agricultural market. Deregulation within South Africa's agriculture has been supported by a changed market environment, new technologies and infrastructure, a shift in public sentiment, international developments, practical realities, and the lively free market debate.

The Marketing of Agricultural Products Act came into operation on 1 January 1997, replacing the 1968 Marketing Act. In terms of the 1968 Act as amended, all the schemes had to be abolished by 5 January 1998, which was after the first full meeting of the National Agricultural Marketing Council. The National Agricultural Marketing Council then appointed a committee

to investigate ways to increase market access for all market participants, small-scale farmers in particular .

According to Van Reenen (1998), the Broadening Access to Agricultural Thrust (BATAT) Marketing drive aims to improve the market access of small-scale farmers in previously disadvantaged communities. The importance of marketing in rural development cannot be over-emphasised. According to the White Paper on Agriculture (1995), the process of deregulation should be so managed that it creates marketing functions in order to reduce costs and increase demand. These conditions will realise the full potential of agriculture's contribution to balanced economic development and serve the needs of the society. In other words, equity in access to the market will therefore require reorientation on the part of traders involved in agricultural marketing.

The government accepts that that private enterprises must be competitive and profitable to survive. It is furthermore accepted that the necessary marketing services must preferably be rendered by co-operatives or other private enterprises. The government must also assist local communities and private enterprises by creating an environment where small-scale farmers have access to services at an affordable cost. Such development requirements should be dealt with where the need exists, preferably by the provincial governments themselves.

The 14 National Fresh Produce Markets in South Africa have traditionally handled the bulk of all domestically consumed fresh produce. By far the biggest of markets is the Johannesburg Fresh Produce Market (National Agricultural Marketing Council, 1998). Since the early 1990s

there have been complaints by producers as to the way the market operates. In particular producers have been concerned about getting the appropriate payments for their produce sent to the market.

Marketing is an important consideration for those involved in the production of any commodity. It is particularly important for producers of fresh produce and of fresh fruit. The highly perishable nature of fresh produce means that it cannot be held back from the market once it is harvested because its quality will rapidly deteriorate. Such considerations have a significant impact on prices.

Fruit and vegetable producers have a choice between utilising one or more of the National Fresh Produce Markets or other fresh produce markets, selling their produce direct to larger market intermediaries outside of the National Fresh Produce Markets, or selling their produce at the local level (National Agricultural Marketing Council, 1998).

2.2 Commercialisation of agriculture as part of rural economic development

Commercialising the small scale-farming sector in South Africa can only succeed if these farmers are able to market their products successfully (Van Reenen, 1998). According to Makhura *et al* (1996), farmers commercialise in order to acquire other goods. That is, when there are possibilities to produce for the market, farmers will find it more expensive to consume agricultural goods. In order to maximise utility, they will produce more and sell agricultural

goods and purchase other goods.

Increased real earning from traditional agriculture will change consumption patterns as the demand for staple foods is expected to increase less than the demand for more luxury goods such as clothing. The demand for goods produced by the household is expected to increase less than the demand for purchased goods (Van Zyl *et al,* 1996).

Countries with small populations and low incomes have small internal markets, which means that many industries are uneconomic. These countries also have to import many goods and agricultural products that cannot be economically produced domestically. Even when new market niches can be found for high value crops, a small country is not a comparative advantage with respect to larger countries, which may have better transport and marketing structures (Eyzaguirre, 1996).

Despite the dominant position occupied by the agricultural sector in a traditional economy, many parts of the developing world have continuously denied agricultural and rural development adequate attention. For a primitive agrarian economy, it is doubtful that industrialisaton can succeed without the prior or concurrent emergence of a productive agricultural sector (Hwa, 1983).

2.3 Local market opportunities

Markets development and access to market opportunities remains vital in small-scale farming. Support should include information, access to appropriate physical facilities, secure payment systems, transportation etc. A relevant aspect is to allow farmers to exploit local market. This requires flexibility in production regimes and choice of crops on outgrower schemes, where central processing facilities depend on the crops by small farmers.

The main market for small-scale producers constitutes the rural areas surrounding the production centers. Generally produce fetches higher prices on local markets than formal markets, the reason being lower or no transaction costs.

In most cases use is made of hawkers who visit the scheme and transport produce to markets. Strengthening of these informal marketing systems may absorb future increases in production. At present accessing fresh produce markets in the cities by small-scale farmers is not a suitable option, because transportation costs limit profitability (Monde-Gweleta *et al*, 1997).

The sustained production of a crop in a particular farm is an indicator of competitiveness in producing that crop (Fafchamps *et al*, 1994). According to Fafchamps *et al*, 1994 competitiveness is the ability of a firm or a country to produce a commodity at an average variable cost below its price. Should any producing unit fail to meet this test, its market position could not be sustained and it would eventually cease to produce for the market. Many locally produced goods like beef in South Africa successfully compete with imports at home without

necessarily being exported. In addition, the ability to sell abroad, and thus run a trade surplus, may be more a sign of weakness than strength. Just as countries do not trade all their output on international markets, farms do not necessarily sell all their crop production. The competitiveness of farm producers is revealed, not only by their ability to sell, but also by their ability to continue to produce in spite of not selling, (Fafchamps, *et al*, 1994).

The market for agricultural/food products in South Africa is increasingly becoming concentrated in the urban townships and informal settlements. Most of the formal marketing systems are not suited to serve the township market, and consequently this sector experiences access problems, which results in a largely inadequate supply. The accelerated congestion of an ever increasing proportion of population around the major cities implies that demand for agricultural products is now concentrated in these areas (Karaan, 1992).

According to Makeham and Malcolm (1986), vegetable growers usually have a choice of different ways of making use of their products. If not consumed by the family, produce might be purchased by co-operatives, it might be sold fresh to wholesalers, retailers or even direct to customers or it might be sold for processing. Growers can be in the position of making packaging, grading, storage and pricing decisions. Often they can choose whether or not to form or join growers co-operatives. There is a strong incentive for them to know how their markets work, and to have some fairly positive ideas about near-future and longer-term price levels.

Prices of fresh vegetables fluctuate a great deal due to their perishability, seasonal production patterns, variability in areas grown and in yields, combined with a fairly fixed demand. Fresh

vegetables are sold mainly through local markets. Production for processing is often based on contracted prices for certain quantities and qualities. These prices are more stable but generally lower than fresh market prices (Makeham and Malcolm, 1986).

A flexible marketing strategy, using some contractual arrangements, some out-of-season production advantage, and a number of fresh produce outlets, can help reduce the harm caused by wide price variations. Individual farmers are at a disadvantage in buying farm supplies or selling farm products. They have relatively little economic power compared with those they must deal with. Farmers acting together in co-operatives have been able to gain much of economic power associated with size (Duft, 1979).

Small-scale farmers in Zambia do not usually sell their produce at the market. The reason being the low yields, little profit realised, similar crop base in the area, lack of labour due to illness and death in the family, poor condition of roads, and lack of transport even when surplus was available (Francis *et al*, 1997).

Where there is market with lots of producers competing to sell their products, and many buyers competing to buy the products, the consumers' demand for goods will tend to be met by the producers making their goods as cheaply as they can sell their output. It needs a lot of information for this to occur, and the price-establishing process in a busy market itself generates enormous amount of information about what consumers want, how much they are prepared to pay for it. It also tells the producer how well he is using the resources available to him in comparison with his fellow, competing producers (Makeham and Malcolm, 1986). The small-

scale farmers understand the importance of access to information in order to increase their competitiveness in the field of marketing and therefore often express a need for more attention (Van Reenen, 1997). A competitive market, where it exists, can be a powerful generator of information and provide valuable guide and incentives to use resources efficiently (Makeham and Malcolm, 1986).

Farmers use market information when selecting enterprises, changing production plans, making long-term investments and deciding the when, where, and how of their marketing strategies. The role of market information is also important in the competitive market processes, which regulate prices in the food industries. Without the widespread availability of market information, buyers and sellers would need to devote considerably more time and money to market search activities than they currently do. The value of information is evident in markets where firms will pay a high price to specialised agencies for profitable information (Kohls and Uhl, 1985).

Markets produce the objective information that guide economic decisions taken by farmers, financiers and firms that produce technology. Missing and imperfect markets lead to divergencies between private decisions and those considered desirable by society.

2.4 The impact of transaction costs on the development of small-scale farmers

According to Steenkamp *et al* (1995), results from marketing research can have variety of implications for both private company manager and public policy makers. Firm managers can be assisted in the development of strategic marketing plans by utilising price estimates. Improved knowledge of market margins aids in precise identification of optimal time to market their products. The persistent nature of issues such as marketing firms pricing their services " too high" relative to farm prices initiated substantial market margin research. (Steenkamp *et al*, 1995)

Marketing margin embodies changing efficiencies in input use as well as the various simultaneous shifts in supply and demand relation, and thus reveals the combined effects of changes in factor productivity, input prices, relative factor usage and profits. Changes in the farm-retail spread over a certain period of time are mainly due to changes in the cost of all factors involved in processing and distribution. Lack of adequate infrastructure is an obvious cause of high transaction costs, and few analysts would dispute the need for improved road, postal and tele-communication networks in the rural areas. Efficient markets require low transaction costs (Lyne, 1996).

At present the severity of the transport constraint is limited to some extent by the relatively high volume of sales to the local communities, as well as direct on-farm sales to hawkers who provide their own means of transport (Van Reenen, 1998).

Complex and costly marketing machinery is not necessary in situations where the volume of production is limited. On the other hand, assembly-line mass production is not feasible until the

marketing machinery opens the doors to the broad mass market. An efficient transport system is essential for modern commercial agriculture (Raw and Atkins, 1989). Some food products are both perishable and bulky and require transport which is cheap, rapid and/or refrigerated.

Generally, the more complex and length the market chain the higher the marketing costs. Thus simple comparison of farmer prices with retail prices is a poor indicator of market efficiency as it does not take into account the costs involved in moving produce along the market chain from farmer to consumer. For example, if a farmer lives 20km from a market he normally receives a higher share of the final price than the one who lives 200km away, because of lower transport costs (FAO, 1993).

In the developing countries most farming is still subsistence-based, and when surplus production occurs, it is often difficult to store and transport over long distances to the markets. Many farmers in United Kingdom and the European Community have tried to increase their profits by selling directly to consumers. One example is doorstep delivery of milk by so-called producer-retailers. It is also possible the food system to operate without middlemen. Farmers can, and times do, perform such middlemen activities as storage, transportation, selling and even processing (Kohls and Uhls, 1985).

For example, a farm roadside market eliminates the food middlemen by transferring his activities to farmers and consumers. The question may be asked why are there so many food middlemen if there are no practical reasons why farmers and consumers could not replace them. The rationale for existence of food middlemen is that these specialised firms often can perform

the food marketing functions more efficiently than either farmers or consumers.

Consider a situation where there are price bands, that is, where the perceived farm-gate sale and purchased prices differ. The discrepancy between the perceived buying and selling prices may be due to the presence of transaction costs. Some of these costs are directly related to the physical details of transaction, such as transport, marketing, packaging etc. Other result from information asymmetries and contract enforcement problems that induce economic agents to incur expenditures associated with search, recruitment, co-ordination, supervision, management and litigation (Fafchamps, 1994).

Competitiveness is not only influenced by the presence of transaction costs in the market for the produced goods; it is also affected by the market failures in other markets. The absence of a market for good, for instance, may seriously hinder the competitiveness of a cash crop producer: resources that could have been used to produce more for market have to be diverted to take care of the households consumption needs. Similarly, the absence of labour markets may restrict producers' ability to produce for the market and thus may hurt their competitiveness.

Roadside farm markets, in contrast, may divert farmers time from agricultural production and require consumer to perform transportation and processing functions. By specializing in these functions, food middlemen relieve farmers and consumers of the considerable costs they otherwise incur for search and transaction activity. The general rule is that middlemen will perform the food marketing functions when their costs for these functions are lower than those of farmers and consumers. First, farmers find it difficult to adjust precisely their production

schedules to meet changing market conditions. Production is to a greater extent dependent on weather and biological patterns of production.

This inability to adjust quickly to changing conditions creates a high-risk element in agriculture. High prices resulting from shortages of production may hamper the consumer market. Farmers are, for the most part, price takers-they cannot, individually, influence the price of their products through their output decisions. In order to raise prices through the control of supplies or adjusting programs, farmers must act as a group (Kohls and Uhl, 1985).

In many instances transportation may either be hired or provided by the farmer himself. Similarly, someone may be hired to do the selling and other marketing tasks, or the farmer may perform these tasks himself. Transportation costs is the key link in the food system's marketing chain, connecting geographically specialised farmers and urbanised consumer population. This marketing function constitutes 8% of the food marketing bill in the United States and contributes significantly to the creation and preservation of place utility for farmers (Kohls and Uhl, 1985).

The forces influencing farm prices can be grouped into four categories. (1) Supply conditions affecting farm and food prices, which include farm production decisions, weather, diseases, harvested hactorage and food imports. (2) The demand conditions which include income, prices, tastes and preferences, population and exports. (3) The marketing sector which influences farm prices through its value- adding activities, price and cost behaviour and procurement strategies. (4) Gorvenment may influence farm prices through price supports, supply control, trade policies or policies influencing domestic demand for food.

The allocation of the consumer's United States of America (USA) food dollars between farmers and food marketing firms is one of the most controversial aspects of food marketing. According to Kohls and Uhls (1985) there are some widely held conceptions about food marketing margin. Many believe that a small margin denotes greater marketing efficiency, and that this is more desirable than a large margin. If this were true, farm roadside markets- where the marketing margin is zero and the farmer receives all the USA consumer's food dollar, would represent the most efficient method of food marketing. In fact, although roadside marketing is becoming more prevalent, it is difficult to envision marketing our food supply in this direct-from-the farmer-to-consumer way.

Another widely belief is that the large marketing margin reflects "too many" middlemen and that the margin could be reduced by eliminating middlemen. The division of labour resulting from the addition of more and highly specialised middlemen might as well increase rather than decrease marketing efficiency. Another misconception is that a large marketing margin "causes" low farm prices, and that an increase in the margin must necessarily lower the farmer's price. Here it is important to remember that marketing functions add both value and costs to raw farm products.

Finally, the size of the marketing margin is sometimes taken as a measure of the profits to be gained by farmers and consumers as a result of performing additional functions. Even with a highly efficient marketing system that functions perfectly, the costs of marketing food will continue to be high and to increase. The food marketing tasks grow more complex and more

expensive with urbanisation, geographic specialisation in agriculture, the influence of consumers and an increase in population. Most marketing costs are influenced by general economic forces outside the food economy, especially labour, transportation, packaging and energy costs.

2.5 Other constraints of agricultural marketing.

As described by Mdaka and Heinshn (1996), the marketing problems are not necessarily a lack of markets and/or transport to take the produce to the market, but the attitude of small farmers towards the marketing options available to them, like Fresh Produce Markets, Fresh Produce pre-packers, Fresh Produce Processors, One-day fresh produce markets, Export markets and Hawkers trade.

Product

Quality requirement is not well understood by the farmers. This is more evident in the retail market. In respect of fresh produce, quality is not the first priority. This priority is held by affordability. This can be attributed by the fact that small farmers' way of crop quality enhancement is hampered by lack of access to cool storage and transport as compared to commercial farmers.

Price

Price variations are perplexing both to the small farmer and the local consumer and may lead to confusion or are perceived as price manipulation. The same applies to discounts. Discounts are not perceived as an opportunity for the consumer to acquire goods, which would under normal circumstances, be out of financial reach. On the contrary, discounts are sometimes seen

as an attempt to dump useless goods on to the consumer.

Promotion

Due to low literacy level of communities in South Africa, exposed products normally sell better than concealed ones. For example, a less literate person find it easier to speculate on the quality of potatoes in a transparent plastic bag than in a brown paper bag.

Distribution

Since local communities tend to be poor, most families do not have fridges. These presents a problem to the consumer in those perishable goods cannot be stockpiled. Small producers may not be able to solve this problem on their own. The problem at this stage is that small hawkers, especially those who move from door to door selling fresh produce, are less in contact with the small farmer, as compared to the kind of relationship existing between these same hawkers and commercial farmers.

It is also difficult to co-ordinate transport to market small farmers' produce; small farmers do not necessarily have similar corps and collection points tend to be far away even if small farmers are from the same irrigation scheme. The problem is exacerbated by the fact that each small farmer has small quantities to market. This increases the cost of transportation, often putting beyond the reach of the small-scale farmer. Small farmers always talk about a guaranteed market as the best marketing option. They would like to find themselves in a position where they can deliver produce to a specific place, be paid cash immediately and have no responsibility thereafter.

2.6 Opportunities of the competitive market in the global arena.

Despite the fact that most countries in the East are self-sufficient in foodstuff and agricultural products, there is still an abundance of opportunities for export to these countries. After all, foodstuff and related agricultural products constituted almost 12% of South Africa's total exports to Asia in 1996. With most of the economies in the various countries in the East growing at a phenomenal pace, more and more will become dependant upon the import of this essential commodity (Ellman , 1997).

The expectations are that South Africa's trade with Europe and America will not grow substantially in future. The biggest potential for growth is, however, in South East Asia. Albeit from a low base, South African trade with Asian countries is growing faster than in any other geographical region of the world. Asian companies are renowned to quickly grasp an opportunity and run with it, a situation which presented itself when sanctions against South Africa were lifted.

The most significant increases in trade with countries in Asia of late were recorded by India, Malaysia, Indonesia and the people's Republic of China. As a result of the fast growing economies in most of these countries, social standards come the need for more sophisticated approach and in many instances the 'Westernisation' of lifestyles.

This improvement in lifestyles immediately presents an opportunity for the wine industry locally which, to a large extent, has already been very successful in their sales efforts in the East. Opportunities for the export of wine to Hong Kong have been identified in particular.

Fruit and deciduous fruit producers in South Africa should also be aware of the seasonal opportunities offered by these countries. Standards are, however, extremely high with severe competition from other competing countries in the Southern Hemisphere.

The demand for fruit juices and health drinks, which among others include 'Rooibos' Tea, is still very strong as a result of the Asian 'health' culture. Countries which have expressed an interest in the importation of beverages are Korea, Japan and Hong Kong.

Due to climatical conditions in many of the South East Asian countries, a market for South African dried fruit has been developed and is expending rapidly. Companies in Japan and Hong Kong have also expressed an interest in important fresh and processed foodstuff from South Africa. Regular inquiries for animal and vegetable products and foodstuff have been received from Singapore and Malaysia whereas Thailand expressed a desire for dairy products.

There are also major opportunities for establishing turnkey operations in joint venture with parties in various countries in the East through which South Africa know-how and goods of agricultural nature can be exported for use, further processing and sale in those countries. South Africa know-how is rated very high and is very much in demand overseas.

With the move towards a 'free' economy in South Africa, which inter alia resulted in the move away from single marketing system, individuals and entities have been challenged to exploit the exports markets on their own or could continue to make use of the established and seasoned

agents. Although both these avenues have its own distinct advantages, there is also a myriad of

risks and pitfalls for which one should always be on the lookout.

CHAPTER 3.

ANALYSIS OF VEGETABLE PRICES

3.1 Introduction

Recent analyses of vegetable prices have devoted attention to the quality attributes of vegetables. This is partly because of the better availability of data; however, the increased concern of managing vegetable farming and the expansion of controlled production through green houses may also be factors. Consumers and suppliers of vegetables have an interest in learning about the costs and prices of vegetable characteristics. Hedonic price analysis is the most prevalent approach of learning about consumer preferences for vegetables. This method relies on answers to hypothetical responses to survey questions from market participants regarding their preferences for vegetables with differing characteristics. Until recently information that market transactions reveal about preferences for vegetable characteristics has not been very much exploited.

In the Northern Province, most vegetables are sold from land (source of production), in shops/stalls, roadside or fresh produce markets. The markets offer a rare opportunity to study revealed preferences for quality attributes of vegetables. Transactions in these markets induce trade-offs between price and characteristics of vegetables. Hence they are revealed, not stated, preferences. Because the markets for vegetables are so discerning of quality, most harvested vegetables are sold individually, with their prices reflecting a willingness to pay for the vegetables in subsequent markets, given its characteristics. The prices that emerge in the sale of

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vegetables can be considered hedonic prices i.e. the price of a particular kind of vegetable depending on its characteristics, including type, location, quantity sold and quality. Hedonic vegetable prices are similar in concept to hedonic housing prices, which depend on characteristics such as location, square metre of floor space, lot size, and so on. The earliest study of hedonic prices for food, and what must be the earliest empirical hedonic study, was carried out by Waugh in 1927, who studied how quality determined the price of vegetables. Today there is considerable literature on hedonic prices of agricultural commodities, including tomatoes (Bierlen and Grunewald, 1995), apples (Stephens, 1990), wheat (Espinosa and Goodwin, 1991), cotton (Brown et al., 1995), milk (Gillmeister et al., 1996), beef (Brester et al., 1993.), and grapes (Golan and Shalit, 1993). However, the hedonic study of vegetable prices in South Africa appears underdeveloped, despite the growing awareness that the quality of vegetables is an important characteristic in all fresh produce markets.

While the estimation of hedonic prices for vegetables is inherently interesting, the results illustrate the continued evolution of the role of quality in vegetable markets. The development should have a significant effect in the marketing of vegetables in the Northern Province of South Africa, where consistent quality of vegetables has been influential in increasing the share of vegetables in fresh produce markets.

Quality may ultimately play a role in the management of vegetables for sale. Agricultural policy, designed in part to produce vegetables in a socially efficient way, will be called upon to recognise that some characteristics provide more value added than others, because they create better products at the market. Some evidence of this phenomenon is provided in this study in the

analysis of hedonic prices of vegetables. Prices for some types of vegetables may be higher than for other types, presumably because consumers value vegetables of some types more than others. The preference that consumers have reflects some unresolved uncertainty about vegetable quality, rather than innate preferences for production process.

In this study hedonic price function is estimated for vegetables (sweet potatoes, China spinach and tomatoes) for the market at two areas in the Northern Province, thereby uncovering behavioural information about the marginal values of vegetable characteristics.

3.2   Methodology

The utility of products provides an incentive to be sought and utilized. The utility provided is a function of the product characteristics. It has been argued that the utility a consumer enjoys from purchasing a product will depend upon the characteristics of the product (Ladd and Suvannunt, 1976). In hedonic price theory it is assumed that values of products are determined by specific characteristics which they possess. Rosen (1974) argues that hedonic prices are revealed by regressing the market price of a good on its traits. The price of a good is the summation of the characteristics of the marginal utilities of the characteristics of the good times the marginal yields of the characteristics (Stephens, 1990; Wilson, 1984; Ladd and Martin, 1976; Lancaster, 1971). In the hedonic model, the incremental increase in price due to increases in any characteristic will equal to the buyer's marginal willingness to pay for the characteristic, as well as the marginal cost of producing the characteristic for sellers (McConnell and Strand, 2000).

When buyers and sellers have to adjust their responses, the marginal hedonic price equals the marginal value to consumers and the marginal cost to suppliers. In the short run, such as prevails in the sale of vegetables, equality between the marginal hedonic price and marginal willingness of buyers to pay holds. However, equality between prices and the marginal cost of production would require a longer period.

Rosen (1974) notes that estimated hedonic price functions do not identify supply or demand for the particular commodity. However, observed prices and implicit prices of embodied attributes may be affected by market demand and/ or supply. Hence, hedonic estimates may have to adjust for effects of changes in market forces over time when time series are used due to market characteristics such as location, type of market etc. (Ladd and Suvannunt, 1976).

3.3 Hypothesis

Lack of marketing strategies by small-scale farmers in the Northern Province has a negative impact on the quantity marketed by small-scale farmers;

Lack of market information and education has a negative impact on marketing decisions by the farmers.

3.4 Hedonic price equation

The general Hedonic price equation can be expressed as follows (McConnel and Strand, 2000):

$$P_{it} = f(\mathbf{Z}_{ij}t)$$

Where:

P_{it} = the price of the ith commodity on the day of the survey;

Z_{ij} = the j characteristics that determine the price of the commodity (Z_{i1}, Z_{i2}, ...Z_{ij}); and

f = the function that relates price P_{it} to Z_{ij}

The above function is not a time-series because the days are not consecutive and observations are only available for one day. Hence the argument t can be suppressed. The marginal price of the jth characteristic, say Z_{ij}, is given the partial derivative:

$$\partial P_i / \partial Z_{ij} = \partial f(Zi)/ \partial Z_{ij}$$

The characteristics vary across days, and so do the marginal prices. In equilibrium, the slope equals the marginal value of the consumer. The estimation of the hedonic price function is a subject of vast literature. In this study issues relating to marginal values are concentrated and therefore a linear hedonic price function estimated. A simple linear form also makes the results on marginal prices transparent. Hence, the linear hedonic price form chosen is:

$$P_i = \beta Z_I + \varepsilon_i$$

Where:

β = the vector of j coefficients to be estimated, and

ε_i = a random error.

In this study where a linear function is used to estimate the hedonic price equation, the dependent variable indicates a change in price (in rand per ton) given a one unit change in the independent variable. The advantage of the linear functional form is that the parameters are directly interpretable and thus the results are easier to explain. Again since all but one of the independent variables are dummy variables, there is no need to calculate elasticities.

The estimated empirical model can be written as:

$$PRI = \alpha + \Sigma\delta TYPE + \Sigma\lambda\ QUAL + \Sigma\omega\ LOC + \Sigma\ \gamma\ MAR + \Sigma\beta\ QNT + e$$

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where:

> PRI = average price of vegetables (Rand/ton);
>
> TYPE = dummy variables for type of vegetables;
>
> QUAL = dummy variables for quality of vegetables;
>
> LOC = dummy variables for location;
>
> MAR = dummy variables for market;
>
> QNT = quantity of vegetables sold (ton);
>
> e = error term; and

α, δ, λ, ω, γ, and β are constants.

3.5 Ordinary Least Square (OLS) Regression

OLS regression analysis is used here to quantify the contribution of the quantity of vegetables sold, average lagged price of vegetables, average price of competing product, average lagged price of competing product and lagged quantity of vegetables to the average price of vegetables. This method is also used to examine the relationship between these variables and the average price of vegetables.

The technique is suited to regression models where a continuous variable is linearly dependent upon a set of independent explanatory variables:

$$Y_i = B_0 + B_{i1} X_1 + B_{i2} X_2 + \ldots\ldots\ldots + B_{ip} X_p + V_i$$

Where

> Y_i = dependent variable (i=1,2.........,k observations),

X's　　= the *p* independent explanatory variables,

B's　　= regression coefficients and

V_i　　= error term

When the parameters (B_i) are estimated using OLS regression it is assumed that:

(1)　　the error term V_i follows a normal distribution, $N \sim (0, \acute{o}^2)$;

(2)　　the conditional variance of V_i is constant or homoscedastic;

(3)　　the explanatory variables are distributed independently of V_i;

(4)　　the random term of different observations $(V_i \ V_j)$ are independent i.e. there is no autocorrelation; and

(5)　　the explanatory variables are not linearly correlated, i.e. there is no multicollinearity

The OLS regression model was estimated using the Statistical Package for Social Sciences (SPSS) available at the University of the North.

The estimated OLS regression model can be written as follows:

$$PRI = B_0 + B_1 \ QNT + B_2 \ LP + B_3 \ CP + B_4 \ LPC + B_5 \ LQV + V$$

Where:

PRI　　= average price (R/t);

QNT　= quantity sold (t);

LP　　= lagged price (R);

CP　　= competing price (R/t);

LPC　= lagged price of competing product (R);

LQV　= lagged quantity of vegetables (t);

B_1　　= coefficients; and

V　　= error term.

3.6   Data collection

The main study was undertaken in the Northern Province where two wards (Tshiombo and Palmaryville) were selected using purposive sampling method. The areas were selected by the researcher where he worked extensively on market-related issues. Local extension officers also knew the vegetable farmers in the area, and it was much easier to arrange for the interviews and get fairly accurate information. The primary data were collected from 38 farmers in the two wards. The collection was done in two stages, Part1 was individual survey, which was further supplemented by group interview. The purpose of group interview was to encourage farmers to discuss marketing issues amongst themselves in a relaxed environment.

The interactive research method was used to get information while at the same time addressing some of their concerns (Theis and Grady, 1991). The basic procedure involved the researcher asking leading questions, followed by the farmers giving a chance to introduce or confirm issues. The advantage of this method is that it provides a good forum where farmers and service providers can interact. The interaction makes the respondent more relaxed and the relationship with the researcher is improved. Structured questionnaires were used for the individual survey while semi-structured questionnaire, were used during the group interview.

The study area agriculturally is suitable for horticultural, grains and animal production. The most products grown in the area are maize, groundnuts, jugobeans, vegetables (Tomatoes, greenpepper, cabbages, onions, chilies, china spinach, spinach) and fruits (avocados, mangoes, litchis, pawpaws and bananas).

Products in the study area are mostly sold to hawkers who operate in the nearby towns. However,

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SOUTH AFRICA

MPUMALANGA

GAUTENG

KWAZULU/NATAL

LESOTHO

NORTH WEST

FREE STATE

EASTERN CAPE

NORTHERN CAPE

WESTERN CAPE

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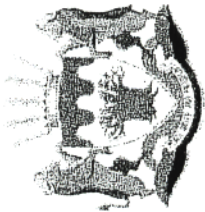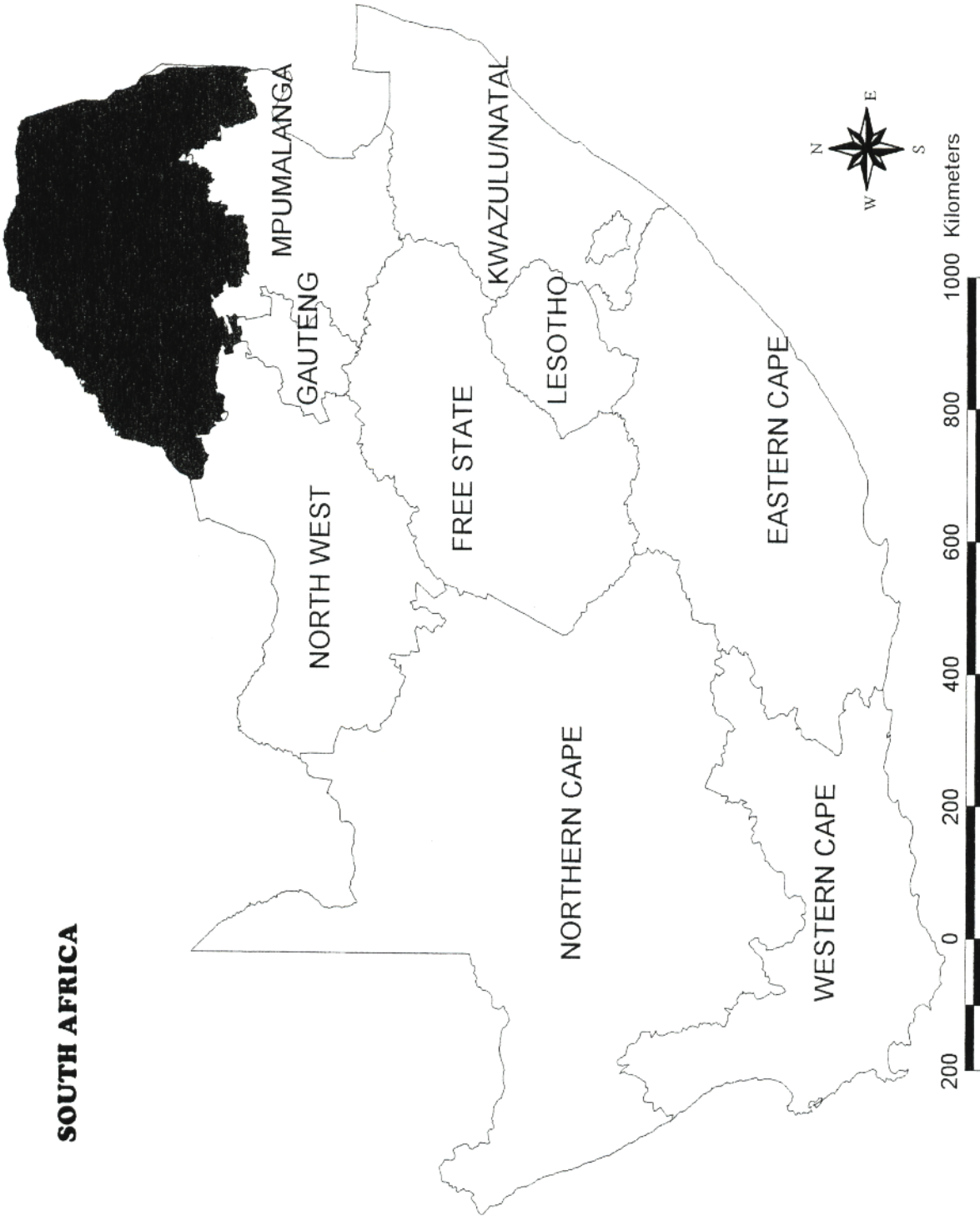
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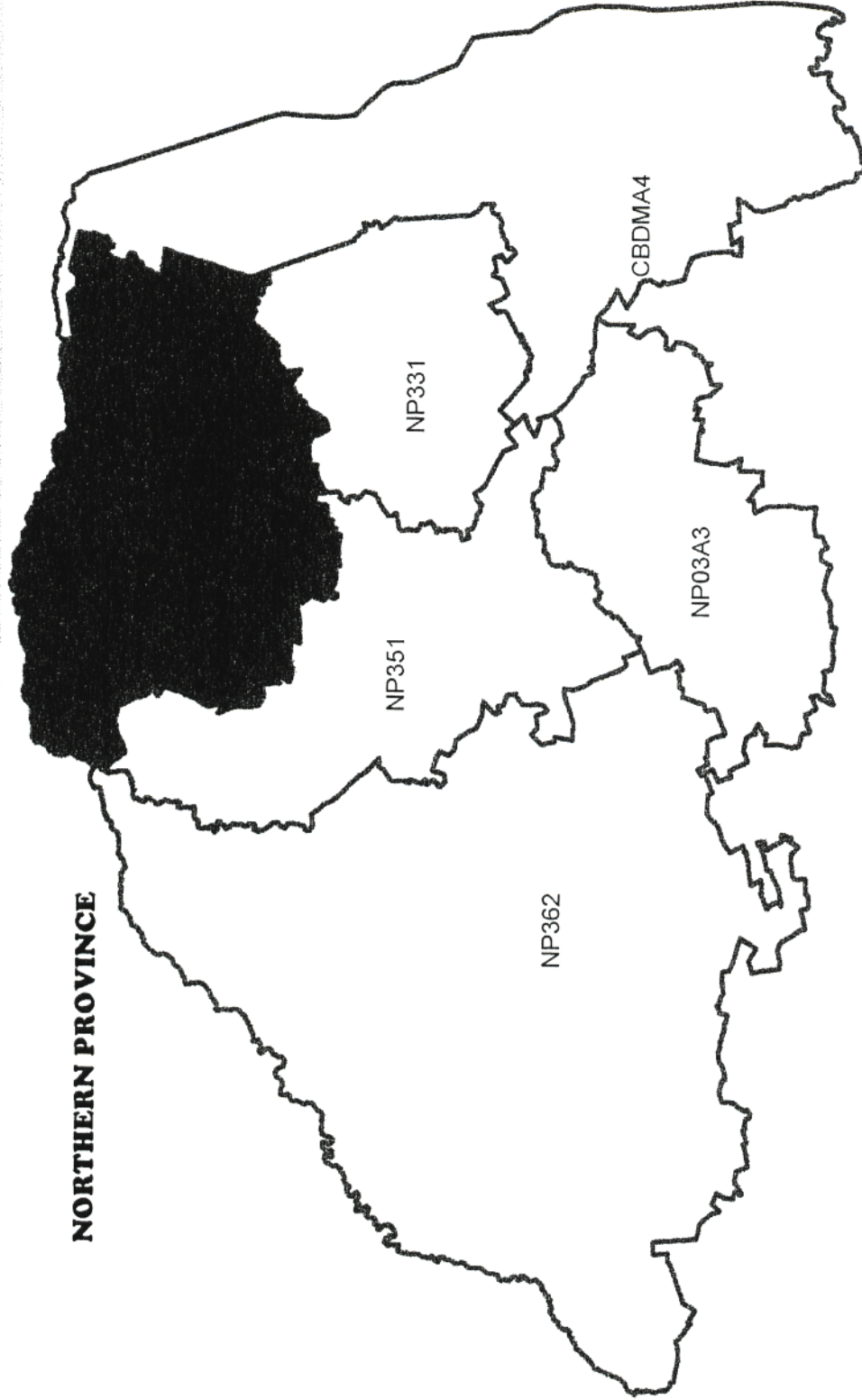
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some produce are sold to the community in the vicinity. In some instances some farmers sell their products on the roadside stalls for people commuting in the public transport.

Goats and cattle are reared on a communal grazing land and on the mountain surrounding the area. Poultry farming is practiced for commercial purposes, however households keep chicken (5 to 20) for own consumption. The transaction system with livestock is direct marketing system where in most cases cattle are sold to butcheries and individuals for different events.

The type of vegetation is mainly mopani shrubveld and mopani bushveld. The veld type range from sour veld, mixed veld to sweet veld, and suitable for animal production (Low and Rebelo, 1996).

The population growth in the area is 2.5% per annum and the average age of the population is 15 years whilst the group younger than 16 years represents 35.4% of the population. There are more women than men in the area. This means that a, lot of men work in other provinces e.g. Gauteng.

The area is characterised by Drankensberg escarpment and Soutpansberg, with steep slopes and peaks that rise to 2000 metres. The average annual rainfall is 580mm. The rainfall pattern is not reliable and severe droughts are experienced about once every eight years. Temperature varies between 2.5 degrees Celsius and 37.5 degrees Celsius which represents the lowest and highest mean temperatures for the coldest and hottest months of the year respectively. The mean annual evaporation is 2500mm (Department of Agriculture, 2001).

The soil type in the area is duplex and paraduplex and is characterised by topsoil that is distinct from sub-soil with regard to texture, structure and constituency. Although highly erodable, they are utilised extensively for dryland crop production.

3.7   Results

3.7.1 Marketing Systems

The results of the study shows that half of respondents (50%), do not have transport to markets, hence, most of what they produce is sold to the community around (Table 3.1). The study also shows that at least 15,8% of the farmers have transport to take their produce to other markets rather than the local ones.

Table 3.1:   Transport to the market

Transport	Frequency	%
Own transport	6	15.8
Hired transport	13	34.2
Do not use transport	19	50
Total	**38**	**100**

Advertisements are done people around who are able to know what is being produced and what is there on the market. The study shows that, 13.2% of respondents do advertise their products so that buyers could easily know and come and buy (Table 3.2).

Table 3.2: Knowledge about the products

Promotion	Frequency	%
Take the products to them	4	10.5
Advertise	5	13.2
Other people tell the about the produces	22	57.9
Take the products to and also other buyers tell them	7	18.4
Total	**38**	**100**

As indicated in Table 3.3, 42,1% of farmers market their products within the community, and only 7,9% of them are able to dispose of their products 50km away and above.

Table 3.3: Distance to the markets

Distance(km)	Frequency	%
<1	16	42.1
1-5	8	21.1
6-10	4	10.5
11-20	1	2.6
21-30	4	10.5
31-40	1	2.6
41-50	1	2.6
>50	3	7.9
Total	**38**	**100**

3.7.2 Cropping pattern

Maize and sweetpotatoes have been identified as the most products that are being produced in the area. Although they are intercropped with maize, groundnuts and tomatoes are the least crops planted as depicted in table 3.4 below. The rest of the cropping programmes for farmers in the sample involved a wide range of crops, many of them grown in very small quantities.

Table 3.4: Most crops planted by farmers

Crops	Frequency	%
Maize	12	31.6
Sweet potatoes	10	26.3
Groundnuts	5	13.2
China Spinach	6	15.7
Tomatoes	5	13.2
Total	**38**	**100**

3.7.3. Vegetable price analysis

Table 3.5 Descriptive statistics of variables (n=38)

Variable		Minimum	Maximum	Mean
Average price of vegetables (R/t)		416.93	910.87	590.4787
Quantity of vegetables sold per year(t)		153	977	485.71
Average lagged price of vegetables (R/t)		420.80	6673.77	776.09
Average price of competing product(fruit) (R/t)		646.49	1287.50	978.99
Average lagged price of competing product(fruit) (R/t)		647.47	1258.44	945.12
Lagged quantity of vegetables		171	961	452.47
Ward/Location/District		0	1	.42
Quality	(good)	0	1	.42
	(better)	0	1	.37
	(best)	0	1	.21
Location	(roadside)	0	1	.45
	(shops/stalls)	0	1	.37
	(Fresh produce market)	0	1	.18
Vegetable type	(sweet potatoes)	0	1	.32
	(chinaspinach)	0	1	.24
	(tomatoes)	0	1	.45

The descriptive statistics in Table3.5 indicates that 42% of vegetables were of good quality, 37% better and 21% best. The results show that farmers produce good quality and not the best in the two districts. This could have a negative impact on the average price realised after harvest. The higher percentage (45%) of roadside markets indicates that farmers have less alternative markets due to either lack of knowledge about other markets or exorbitant transportation costs to other markets. Tomatoes seemed to be the one produced most, followed by sweetpotatoes and chinaspinach. Tomatoes act as a complementary good to meat and vegetables that are consumed by most of the people. This product is consumed everyday and the demand for that results in higher supply as compared to other products.

The results of the estimated OLS regression model are presented in Table 3.6.The results show that the predictive power of the estimated equation is good (R^2 = 0.839). Average price of competing product (fruit) and average lagged price of vegetables contribute positively to the average price of vegetables, *ceteris paribus*. These variables have significant impact on the average price of vegetables. Fruits and vegetables are complementary products in the urban areas. They complement each other in making salads and desserts consumed there. The opposite is true case in the rural areas, in particular, where this study has been conducted. Consumption patterns in these areas differ completely with the urban life. The lagged price of fruits has a positive effect on the average price of vegetables. This could mean that the price increase of one would never have negative impact on the price of the other.

Although most farmers market their produce within the community, the amount sold to the nearby towns is very significant. This is because hawkers buy in bulk and they use bakkies to collect the goods. However, the average lagged price of vegetables is a yardstick to determine the future price of this commodity. Farmers always rely on this to determine prices. According to Table 3.8, the lagged price of both the irrigation schemes seems to be higher than the average price of vegetables. This could have been the result of increase in supply of vegetables, which has led to drop in prices.

Table 3.6. OLS regression results

Variable	β	Standard error	t-value	Significance
(Constant)	11.926	58.975	.202	.841
Quantity of vegetables sold(R/t)	-.304	.197	-1.544	.132
Average lagged price of vegetables(R/t)	2.090E**	.009	2.331	.026
Average price of competing product(fruit)(R/t)	.665***	.129	5.140	.000
Average lagged price of competing product(R/t)	-4.655E-02	.114	-.407	.687
Lagged price of vegetables	.227	.215	1.057	.298
	R	R square	Adjusted R square	
Model	.916	.839	.814	

*** $p \leq 0.01$; **$p \leq 0.05$; Dependent Variable: Average price of vegetables (R/t)

Table 3.7: Estimated Hedonic Price Equation

Variable	β	Standard error	t-value	Significance
(Constant)	642.59	55.00	11.68	.00
Quantity of vegetables sold/year(tons)	-7.490E-02	.07	-1.09	.28
Ward/Location/District	-2.52	35.94	-.07	.95
Better quality	43.55	54.29	.80	.43
Best quality	70.25	41.57	1.69	.10
Shops/stalls	-47.966	41.02	-1.17	.25
Fresh Produce Markets	-40.72	51.43	-.79	.44
Chinaspinach	-117.33**	53.28	-2.20	.03
Sweetpotatoes	10.27	41.99	.25	.81
	R	R square	Adjusted R square	
	.54	.29	.09	

**$p \leq 0.05$; Dependent variable: Average price of vegetables (R/t)

Descriptive statistics of the variables used and the estimates of the Hedonic Equation are presented in Table 3.7. Positive coefficients are observed for better quality and best quality while quantity, location and market show negative coefficients. The positive coefficient for quality is not surprising. Quality of the product provides information to buyers. Price generally increases as quality increases. The exception is quality " best" for which few observations were observed and whose coefficient is statistically insignificant. The quality differences as based on such elements of vegetables as maturity texture, smoothness and injury. However this definition relies on the subjective interpretation of the marketers.

The two irrigation schemes have fruit tree planted on them, especially mango trees. The type of these trees is mostly indigenous (sugar) mango trees and they are marketed for atchar production and as fresh ripe fruit. These mango trees mature earlier than other cultivars in the area. Farmers during this period are not price takers, and thereby getting higher prices than any other crop ready for market. All these impact positively on the average price of the vegetables planted in these areas.

Vegetables are marketed in shop/stalls, Fresh Produce and roadside. In this case farmers tend to be price takers in these markets mainly due to the fact that products being produce are homogenous and perishable. Even though they are price takers, when selling their produce to all these markets, they always use the previous years prices as a yardstick to determine the current prices. They do not know the fact that prices fluctuate on daily basis. Lack of market information becomes an issue during this period, more especially if prices offered to them is lower than what

they got during the previous season. This has a positive impact on the average price determined for the vegetables sold during the period.

The subjective quality of produce offered for sale and assigns it a value relative to other products. These relative values may be unique for each buyer but provides buyers a way in which to rank vegetables from different suppliers. The quality definitions differ across the marketeers and change over time.

The "value for money" concept usually takes into account the physical appearance, maturity and reliability of suppliers.

Sims, Atkinson, and Miller (1978) note that producers have a great influence on the quality of vegetables through site solution, variety selection, nursery management, field cultural practices and harvesting. They observe that both yield and quantity may be improved by using adequate amounts of required nutrients if they are lacking in the soil.

The average price of vegetables and average price of competing product (fruit) are equivalent in both districts (Table 3.7). This could be the fact that these districts are nearer to each other (same sub-region), and the must be sharing the same market information on prices. However, the average lagged price of vegetables in both districts show a remarkable difference indicating lack of sharing this information in the past years. Tshiombo irrigation scheme produces best quality produce as compared to Palmaryville irrigation scheme. The reason being that Palmaryville

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Irrigation Scheme is a newly established scheme while Tshiombo was established in the 60's. The farming systems in both schemes are synonymous due to may be the consumption patterns and habits of the communities.

Table 3.8 Comparison of variable means of the two districts.

Variables	Palmaryville (n=22) Mean	Tshiombo (n=16) Mean	t-value Equal variance assumed	Significance (2-tailed)
Average price vegetables(R/t)	592.75	587.35	.14	.09
Quantity of vegetables sold/year(t)	468.00	510.06	-.47	.64
Average lagged price of vegetables(R/t)	874.34	641.04	.71	.48
Average price of competing product (fruit)(R/t)	979.07	978.88	.00	.99
Average lagged price of competing product(fruit)(R/t)	929.33	966.83	-.73	.47
Lagged quantity of vegetables(t)	434.73	476.88	-.51	.61
Good quality	.45	.38	.48	.64
Better quality	.18	.25	-.48	.62
Best quality	.36	.38	-.07	.95
Roadside	.45	.44	.10	.92
Shops/stalls	.36	.38	-.07	.95
Fresh Produce Market	.18	.19	-.04	.97
Sweetpotatoes	.32	.31	.04	.97
Chinaspinach	.23	.25	-.16	.86
Tomatoes	.45	.44	.10	.92

CHAPTER 4

SUMMARY AND CONCLUSIONS

Raising farming output is important to economic development but equally so to develop marketing so that extra production reaches consumers effectively. It is often hard for people in production to see that the market functions dictate production policy, which must be firmly based on market potential. Market conditions basically influence production so much that production and marketing are often best regarded as an integrated whole.

Product quality is among a farmer's most visible contacts with consumers. In this study quality seemed to be the major characteristic which determines pricing of vegetables. If products do not meet the desires and wants of buyers, then unless adjustments are made, failure may result. Frequently a higher quality level requires the use of better farming methods, which increases production costs and ultimately raises product's price.

Product features, textures, colours and sizes are dimensions that require careful consideration by farmers. Many of these characteristics can be controlled by farmers through production, harvesting and packaging practices. The little knowledge that these farmers have, do very little to satisfy consumer's wants and needs. To the extent that farmers do not know what the target markets wants, they might as well rely on luck. The unspecialised nature of the informal vegetable trade necessitated that farmers in surplus areas find their own means of disposing vegetables, typically to consumers. There are no open markets (Fresh Produce) in the locality from selling vegetables to retailers who may have knowledge of supply and demand

characteristics in other locations.

Small-scale farmers always regard these as separate entities. For them, the first thing to consider is production and marketing comes afterwards without any relationship with production. Homogeneity of products produce has always been a cause for the lower prices they realise.

Good marketing facilities are especially important for small-scale farmers since small surpluses over subsistence can be marketed. Farmers in the study area market most of their produce in roadside stalls, which are in bad condition. It is often time-consuming for small-scale farmers to take their surpluses to a market place, be it to, a shopkeeper or Fresh Produce market. This could be the reason why they always prefer farm gate transaction as the most effective one. Small-scale farmers always complain that the distributive margin between the prices they receive and that consumer pay is too high. This always happens where transactions are done by middlemen e.g. Fresh Produce market. To address all these, government policies regarding marketing should be based on provision of marketing information, training, and help small-scale farmers to improve their competitive position and raise both demands of produce and quality

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MARKETING OF AGRICULTURAL PRODUCE: THE CASE OF SMALL-SCALE FARMERS IN THE NORTHERN PROVINCE

Date: ——————————————   Enumerator:——————————

Name of respondent:_____   Respondent's code:_____

Village:_____   Region:_____

Respondent position in the household:

    Household Head ☐

    Husband   ☐

    Wife   ☐

    Son/Daughter   ☐

    Other   ☐

Ask to speak to the persons responsible for the household; preferably a husband and/or wife. If they are not available the son or daughter could be interviewed if they are highly involved in the household activities.

Anything you tell us will be kept to ourselves, and no names will be given to anyone.

1. GENERAL HOUSEHOLD INFORMATION

1.1. What is the household head's position in the village:

Traditional Authority council member☐
TLC☐   Political activist ☐   Community dev activist ☐   Professional☐

Traditional doctor ☐   Association/club leader ☐   Other (specify)_____ ☐

1.2. How long have you lived in this community?_____ Years or since 19____

1.3. Where did you live before coming here?_____

1.4. Why did you move here?_____

1.5. Household structure (refer to the table 1.5.1.)

1.5.1. *Household structure*

Household number	Sex M/F	Age (Years) or Born in	Marital status (m or s)	Highest education passed	Occupation	Involvement in Informal sector(y or n)	Place of work (Name and distance)	Involved in agric (y or n)
1. Household Head								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
TOTAL								

1.6. Do you (or does any one) in the household run any business which is separate from farm activities: Yes or No. If "yes" answer the following questions:

Member of household	Activity or income source	Number of people employed	Income per month
1.			
2.			
3.			
4.			
5.			

1.6.1. Is there any link between these activities and agriculture? Yes/No _____

1.6.2. If yes explain the linkage ————————————————————
————————————————————

2.

2.1. Land

2.2. Complete the following land-use table:

Land use type	Area owned	Area used (last season)			Total rent/ sharecrop®
		P.T.O/ Communal or Tribal	State land	Freehold	
Cropland: Irrigated					
Dryland					
Fallowland					
Residential area					
Other					

2.1.2. Is your cropland fenced? Yes/No————
Do you experience security problems (theft or cattle invasion) Yes or No————

2.2. Labour

2.2.1. Do you make use of hired labour? Yes or No. If you do, answer the following questions

	No of workers		Total days employed	Total hours worked	Rates per day®		Total amount per year®
Permanent							
Seasonal							
Casual							
Household labour*							

*indicate the units if payment in kind

2.3. Capital

2.3.1 Inventory (only farm equipment)

Item	When bought (Year)	Where did you buy this implement	Distance(km)	What was the price or value of exchange®	Did you pay cash or on credit or exchange	If on credit how did you pay – e.g. monthly instalment	What is current value of the item®
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
Total							

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2.2.3   Do you have any of the following

    1)   Savings account   Yes/No ————————

          If yes what is the current value?   R————————

    2)   Insurance policy (specify type:_____)   Yes/No

          What is the monthly premium?   R_____

    3)   Are you a member of co-operative/savings club/muholisano fund: Yes/No————

          If yes, what is your monthly contribution: R ————————

          What is the total value of fund?   R _____

2.4   Human Resources (education and information)

2.4.1   Where did you learn about farming:

    1)   Formal school (such as agricultural college, high school)
    2)   Informal school (such as Venda training Trust)
    3)   Nonformal training (training centers and demonstration plots)
    4)   Informal visits by extension officers
    5)   Farmers' days and agricultural exhibition shows
    6)   Visiting other farmers
    7)   Other – specify_____

2.4.2. Name the farming, or other skills, you have learned and where you acquire them:

Skills	Place	Duration	Certificate	When	Costs	Assist farming
e.g. tractor	Farm/ driving school	7 years	Licence	1978	free	Yes , transport
Nursery						
Poultry farming						
Cattle farming						

2.4.3. Please provide the following information regarding sources of information.

	Number	Distance (nearest) km	No. of contacts (per year)	Remarks
Extension offices				
Demonstration plot				
Training centre				
Co-operative				
Radio				
Newsletter				
Newspaper				
TV				
Other specify				

2.4.4. Provide information about educational institutions

	No. of schools in the area	Distance of nearest school	No. of family members attending	Relatives attending
Pre-school/chreche				
Primary school				
Secondary school				
Agricultural college				
Technikon				
Technical college				
University				
College of education				
Other, specify				

2.5. Natural and cultural resources

2.5.2. Please complete the next table about water resources

User	Type of water source	Source distance in km	Is it sustainable?	Alternative source available	
Household				Yes	No
Crops				Yes	No

2.5.2 Does your area have enough rain: Yes/No

2.5.3 How long is the rain season: _____ months i.e from_____ to_____

2.6. Management

2.6.2. 1) Who decide when to: 2) Who does the:

      a) Plough_____   _____

      b) Plant_____   _____

      c) Weed_____   _____

      d) Fertilize _____   _____

      e) Harvest_____   _____

2.6.2 Do you keep farm records?   Yes/No

If yes, how do you keep them?

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1) In special books for records_____
2) Pieces of paper in files_____
3) Keep information in files_____
4) Other ways, specify_____

2.6.3. How does it help to keep the records?
Explain_____

2.6.3 Do you intercrop/mixed cropped: Yes/No/Both

2.6.4 If "yes" which crops do you intercrop?_____

2.6.5 Which crop do you cultivate most?   _____

2.6.6 What is the purpose of the above production?

_____
_____
_____

2.6.7 Would you like to produce something else? Yes or No

If "yes" what would you like to produce?
_____
_____

2.6.8 Why would you like to produce the products mentioned in 2.6.7?
_____

2.6.9 Where do you sell your products?

Volume of sales/year

Option	
Hawkers	
Restaurant	
Fresh produce markets	
Schools, Hospitals, Creches	
On the open market in town/cities	
Private individuals	
Other, specify	

2.6.10 How do you transport the products?

Option	X
Own transport	
Hired transport	
Taxi	
On foot	
Do not use transport	
Other, specify	

2.6.11 Do you transport all your products that you sell yourself or do some buyers come to collect? _____

Transport all products ☐
Do not transport all products ☐

2.6.12 How do the buyers that buy from you know about the products?

Option	
Do you take your products to them	
Do you advertise	
Do other people tell them about the products	
Other, specify	

2.6.13 What was your most recent price that you received for the products?

Product	Unit	Price®

2.6.15 Were you satisfied with the price you have realised? Yes/ No
Explain the reason

_____

2.6.16. How do you determine prices for your products?

Option	X
Same price that other farmers ask	
Same price as on fresh produce markets	
Own price	
Take whatever price offered	
Use information from extension officer	
Other, specify	

2.6.17 How do you prepare your products for selling?

Option	X
Cleaning (cutting, peeling, washing)	
Packaging	
Preserving	

2.6.18 What is the distance to your market?

Option(Kilometers)	X
<1	
1-5	
6-10	
11-20	
21-30	
31-40	
41-50	
>50	

2.6.19 Are the roads to these markets in reasonable conditions?   Yes/No

2.6.20 Would you like to change anything about the manner in which you market/sell your
       products?   Yes/No

If yes what would you like to change?

....

....

2.6.21 Do you feel there is enough market places in your area?   Yes/No

2.6.22. What do you think the government can do to make marketing easier?

....

....

2.7   Infrastructure/ Economic environment

2.7.1 Access to important centres

	Distance	Roads conditions (km tar:km gravel)	How often do you visit the place	For what purpose	Transport available? Type (own, taxi, bus)	Cost of transport
Chief's kraal						
TLC's offices						
Magistrate offices						
Sub-regional Agric offices						
Post offices						
Clinic						
Hospitals						
Nearest town						
Louis Trichardt						

3. Crop production

Please provide the following information regarding past season's crops (indicate units when stating amounts)

Crop	Area planted	Date planted	Total production	Amount consumed at home	Amount sold	Price per unit	Total revenue	Total cost of harvesting	Sold to whom

3.1   Inputs past season I

Crop I.........................   Area...............   Dryland or Irrigated
          Monocrop/Mixed/Intercrop

                                                                    Other
products....................................

Input	Amount used	Bought or self-produced	Supplier	Distance from supplier	Total cost