THE EFFECTS OF MIRAA TRADE ON FARMERS WEALTH: A CASE STUDY OF FARMERS IN MERU NORTH DISTRICT, KENYA

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ABSTRACT

Traditionally, miraa was used as a cultural symbol by the communities in the district, but the commodity has since been fully commercialized. Miraa trade is believed to affect people’s lives in various aspects ranging from economic, social, cultural, health and legal. The biggest part of the produce is being exported to European countries and other parts of the world. The research project proposal seeks to investigate the effects of Miraa trade among farmers in Meru North district of Eastern province. Miraa trade has been faced with a lot of opposition both from governments and organizational groups. For example, the National Agency Control Against Drug Abuse (NACADA) has in many occasions called for ban of free trade of miraa in order to reduce its abuse. Various governments such as the United Kingdom have attempted to ban Miraa trade across their borders on the same premises. Worse of all, the government of the Republic of Tanzania has completely banned miraa trade within her borders. These decisions by governments and organizations have therefore attracted a lot of attention toward miraa trade in order to establish its importance or effects to the society. It is within this premise that the researcher intends to carry out a research to establish the effects of miraa trade on farmers, wealth in Meru North district. A descriptive research design will be used. Data for the research will be collected using structured questionnaires to be administered to farmers in six main locations of Meru North district. Each region will have twenty respondents making a total of 120 respondents. A structured questionnaire will be administered. Data obtained will be analyzed using both qualitative and quantitative methods. Likert type and semantic differentials will be used to assess the effects of Miraa trade among the farmers.

Key Words: miraa trade, commercialization, farmers

INTRODUCTION

Miraa is a horticultural crop, which is legitimately grown, traded and consumed in Kenya in its raw form. Harvested from what resemble knobbly fruit trees, miraa has been a feature of life in Meru North District of eastern province in Kenya for generations. Chewing the soft bark peeled from the shoots, releasing cathine and cathinone—chemicals that can cause anything from benevolent euphoria to twitchy paranoia—is woven into the fabric of daily existence, part of Meru's distinct ethnic identity. Traditionally, a girl hoping to marry would tell her father her intentions while offering him a miraa twig. If he took it, he accepted her choice of suitor. A suitor visiting his in-laws for the first time was expected to turn up with a bundle of miraa as a gift. Presenting someone with miraa was a way of apologizing for a slight, chewing together the natural seal on a business deal.

While all this remains true, today miraa-chewing is far more than a picturesque local custom in Kenya. The big consumer markets for miraa have always lain to the north of Kenya, in Somalia, Djibouti, Ethiopia, and the Middle East (Neil, 2004). When Somalia disintegrated as a nation-
state in the early 1990s, the Somali community, with its miraa-chewing demands, was scattered across the globe, and traditional trade routes were disrupted. Hundreds of Somalis moved into the town, so many that they built themselves a mosque. With colored wraps knotted around their waists, they are easily distinguished from the locals. They linked up local farmers with the international market, ensuring that Meru's miraa reached the Somali diaspora in London, Amsterdam, Rome, and North America. That development coincided with plummeting prices for coffee, Meru’s other main product. Coffee farmers found that miraa—which needs very little tending—was not only far easier to grow than coffee, it also gave a far higher return for their money.

Although the Kenyan economy has languished in the doldrums, miraa has boomed at a rate impervious to national trends and international disapproval. Kenya's National Agency for the Campaign Against Drug Abuse (NACADA) had called for a ban, but locals insist miraa is no more dangerous than alcohol, no more addictive than coffee. But then, they would say that, because there's big money being made in Meru, which has both advantages—"there's no petty crime here because everyone has money" and a darker side: the high number of "cuttings" when traders squabble over prices and turf. On a bad day, cutting escalates to hand amputation, for in Meru, there is no more serious crime than being caught stealing a man's miraa, his hope for the future (Wrong, 2005). More miraa is grown, picked, sand traded in Kenya today than ever before. Domestic consumption, they say, now extends beyond traditional miraa-chewing communities, with even ethnic groups with no history of use reported to be taking it up. Outside Kenya, Tanzania has become a big new market, and the Somali diaspora's appetites seem insatiable. But, bizarrely, no accurate figures are available to quantify the trend. The reason being the Kenyan government having not classified miraa as a cash crop, so the authorities ignore it, neither tracking its sale nor offering support to farmers (Wrong, 2005). Cynics might say that the government's very lack of involvement is the reason the sector has bucked the troubled trend of other agricultural sectors in this corruption-blighted country.

Miraa is certainly a striking example of business ingenuity rising to meet formidable challenges. The chemicals that give chewers their high start breaking down as soon as the twigs are picked, so time is of the essence. Somehow, an industry with no coordinating body, whose players are mainly small farmers or modest middlemen, manages to get tens of thousands of neatly packed kibundas (bundles) of fresh miraa loaded onto the "miraa jets"—the Toyota pickups; down the long, potholed road to Nairobi's Wilson Airport; crammed aboard the notoriously overloaded flights; and onto the coffee tables of expectant chewers in foreign capitals in under two days. According to a Meru-based development expert, this is a business which has always operated informally, in which accounts are kept on the back of cigarette packets, yet it's the most efficient agricultural industry on the planet. The commodity has a 48-hour shelf life, but it goes all over the world. International hostility to miraa is based on ignorance and myth rather than common sense, creating fears that miraa may not be allowed to enjoy its freedom much longer (Wrong, 2005). Local politicians concerned about the nagging issue of legitimacy are already talking
about pressing the Kenyan government to officially recognize miraa as a cash crop. Certainly, in a country whose grasping political elite has always shown a talent for latching onto profit-making ventures and sucking them dry, the lack of regulation surrounding the trade seems an anomaly or an oversight. And, of course, should miraa escape Kenya's bureaucratically minded legislators, another, possibly far greater, danger looms ahead: that dreaded U.N. report.

Economically, Miraa is a source of income among majority of Meru North farmers. It is traded locally and internationally thus helping to improve the socio-economic status of the Meru community. The Miraa trade has been a source of rivalry between the Ameru of Meru North and the Somali’s of Northeastern province with each of the community claiming ownership/ supremacy over the trade. The Ameru community claims that their Somali counterparts need not to buy the crops directly from the farmers (Mwenda et al, 2003).

Miraa is grown in other parts of Kenya but in small quantities. These include Meru south, Embu, Mount Elgon area, and the Chyullu hills in Kajiado District. However, Miraa from Meru North is rated the best quality in Kenya and worldwide. Miraa is also grown in Yemen Ethiopia and Djibouti where there are fully pledged Miraa industries purposely created to streamline its cultivation, processing, marketing and consumption to protect the industry (Guantai, 1982). Scientific research has isolated many components of Miraa; some alleged to have effects on the nervous system. Some studies claim that Miraa chewing induces euphoria and sexual stimulation, aggression and violent behaviors, impotence and heart problems (Kokwaro, 2002).

Effects and Importance of Miraa

Natives of Eastern Africa, the Arabian Peninsula and the Middle East have used Miraa since antiquity as recreational and religious drug (Neil 2004). Miraa trade is legalized in many countries, including Great Britain where Miraa can be legally imported, distributed, used and/or exported. Miraa has long been an acceptable substitute for alcohol among Muslims. During the period of Ramadan, the use of Miraa is popular to alleviate fatigue and reduce hunger. Although Miraa can be abused, it is often used in social context similar to the manner in which coffee is consumed in other parts of the world. Reports from Yemen indicate that Miraa is consumed by 3 out of 4 Yemenis, and account for more than 40% of the average family budget (Numan 2004).

Several millions of people are estimated to be frequent users of Miraa and its consumption is increasing. The prevalence varies widely between the various countries (Omolo 1987). In Somalia, it is estimates that about 18% in the South and 55% of the population in the north were consumers. The ‘Miraa party is a predominantly male pastime, though women are occasionally involved (Neil 2004). According to Kennedy (1987), approximately 50-60% of women chewed Miraa more than once a week compared with 80-85% of men. He also found out that in countries such as Yemen and Somalia, many houses have a room specifically used for chewing Miraa.
Historically, Miraa has been used for medicinal purposes as well as an aphrodisiac (Kennedy et al. 1987). Though chewing is the commonest mode of administration, it has been taken as tea or coffee and is occasionally smoked. Miraa must be chewed while it is fresh, and is usually wrapped in banana leaves immediately after picking, to preserve its potency (Neil 2004). A recent report by the United Nations on drug abuse in Africa indicated that Miraa has a deep-rooted social and cultural tradition. The principal features of the ‘Miraa experience were described in the report as increased levels of alertness, ability to concentrate, confidence, friendliness, contentment and flow of ideas. However, though much has been written about Miraa, most of the authors have concentrated the uses and effects of the stimulant to the users. Preliminary research and interview by the researcher with farmers have found out that the farmers are in great contradiction with the reports published in various articles in journals and the independent press as far as miraa consumption and trade is concerned. Most of the farmers supported that the plant had no side effects and contributed positively to their economic and social welfare. According to Meru North district development plan (2003-2008), approximately 60% of the population depended wholly on income from miraa either directly or indirectly. Miraa trade can be dated as early as 1847 when it was used to pay dowry and other fines by the native communities (Maitai, 1974). According to Neil (2004), miraa trade got to climax as from1990 when traders of Somali origin developed interest on the trade after the collapse of the Somali government. Currently, miraa is sold many parts of the world with the biggest share going to Europe. A research by wrong (2005) revealed that the most beneficiaries of this practice were the middlemen who exploited the farmers. In the European market, a bundle of miraa (bunda) goes for 400 Euros while the farmers sell it to the traders at only 20 Euros. This has therefore deprived the farmers of their resources and created major wealth for the traders (Neil, 2004). The motivation for this study was the contradiction between what various researchers have reported about miraa trade and the farmers’ perception on the practice.

STATEMENT OF THE PROBLEM

Currently, Miraa has been fully commercialized, with the produce being introduced in almost all parts of the world. According to Neil (2004), miraa trade has been faced with lack of a clear policy framework to promote and regulate the production and marketing of the commodity, hence not able to effectively identify existing opportunities in the international market. The industry is run on the free flow with the fittest surviving. Survival is determined by the amount of money one has and his or her ability to convince the farmers to sell their produce at throwaway prices. Farmers generally lack information concerning the market conditions, hence being exploited by the exporters and other local traders. Miraa in Kenya is traded under an absolute buyer controlled market. The largest Miraa exporters controlling the Kenyan Miraa trade are said to be of Somali origin and using their fortunes to fund war activities in Somalia (UN report 2003). According to the chairman of NYAMITA, economic well-being of both farmers and traders has improved tremendously in the last few years. This has been attributed to
the intervention of NYAMITA and Njuri Ncheke (Council of elders) in controlling and regulating the trade. However, the trade has not been without challenges as opposed to other cash crops in the region such as coffee and tea leaves. A report by the ministry of education attributed poor performance in schools and high school drop out to miraa trade, which contributed to increased child labour and early marriages. Despite all these speculations on Miraa trade, there has not been any study that has focused on the effects of miraa trade, particularly in the point of view of the farmers. In addition, there is no study, which has been conducted exhaustively to determine the effects of commercialization of Miraa, which originally was believed to have significant cultural values to most of the communities where it is grown. It is therefore upon these premises that this study seeks to establish the effects of Miraa trade in the region where the produce is grown. The study therefore seeks to establish the effects of Miraa trade in Kenya as perceived by the farmers in Meru North District?

GENERAL OBJECTIVE

The overall objective of the study is to determine the effects of miraa trade among farmers in Meru North district.

SPECIFIC OBJECTIVES

1. To establish the economic effects of miraa trade among farmers in Meru North District.
2. To establish the social-cultural effects of Miraa trade among farmers in Meru North District.
3. To establish the development effects of Miraa trade among farmers in Meru North District.

LITERATURE REVIEW

This chapter will discuss the concept of perception so as to determine what variable will be tested in order to answer the research questions in chapter one of this proposal. It will also focus on the effects of Miraa as found in existing literature. The uses and importance of the plant to the country’s economy will also be discussed. The chapter will also highlight the changes caused by Miraa commercialization in the farming community.

The Concept of Perception

According to Kotler (2004), a person’s buying choices are influenced by four major psychological factors-motivation, perception, learning, beliefs and attitudes. He further adds that perception depends not only on the physical stimuli but also on the stimuli’s relation to the surrounding field and on conditions within the individual. Perception can be defined as the
process of receiving, organizing and assigning meaning to information or stimuli detected by our five senses. It is an approximation of reality. Our brain attempts to make sense out of the stimuli to which we are exposed. What we perceive is the meaning we give to something sensed (Kotler, 2004). It is further said that perception is the critical activity that links the individual consumer to group, situation and marketer influences (Hawkins et al, 1992). Kotler (2004) goes on to allude that people can emerge with different perceptions of the same object because of three perceptual processes; selective attention, selective distortion and selective retention. According to Loudon et al (1979), in selective attention, consumers tend to screen out some stimuli and notice some because people are exposed to tremendous amount of daily stimuli. What an individual chooses to notice depends on his/ her situation in terms of his needs, what he anticipates or stimuli with large deviations. On other hand, Luodon et al (1979) describes selective distortions as the tendency to twist information into personal meanings and interprets information in a way that will fit our preconceptions. He further describes selective retention as a process in which people forget much of what they learn but retain information that supports their attitudes and beliefs. Information processing is a series of activities by which stimuli are transformed into information and stored (Hawkins et al 1992).

**Measurement of Perception**

In consumer behavior, perception research has been used to study a wide range of marketing strategy issues. Schiffman and Kanuk (2004), confirms that perception research is undertaken to ascertain the likelihood that consumers will accept a proposed new product idea, to gauge why a firm’s target audience has not reacted more favorably to its revised promotional theme or to learn how target customers are likely to react to a proposed change in the firm’s packaging and label. A variety of techniques have been devised to measure perception. Njuguna (2002) used similar techniques to study attitudes of customers towards electricity efficiency. One of the commonly used scaling techniques to study similar techniques is Likert scale that was developed by Likert in 1932. Usually the individual is asked not only if they agree or disagree to the statement, but also to indicate the extent to which they agree by choosing one of the following five categories: Strongly agree; Agree; Neutral/Don’t know; Disagree; and Strongly disagree. This produces a numerical score and a value is given to each category.

Semantic Differential scale is another technique that was developed by Osgood et al (1957). It comprises a number of semantic scales based on bipolar objectives such as good or bad, hot or cold. The respondents are asked to rate a concept in terms of a positioning between +3 and –3. Proponents of the technique identified three main clusters of similar scales, which they labeled: Evaluation, Potency and Activity. This accounted for nearly 50% of the total meaning of the concept- irrespective of the concept, the adjectives used or the respondents interviewed (Williams, 1997). The other techniques include Rank Order Scales where subjects are asked to
rank items such as products or retail stores in order of preference in terms of some criterion, such as overall quality or price/ value for the money.

**Miraa and the Society**

Miraa is a mild stimulant herb grown in Somali, Ethiopia, South Africa, Yemen, and Kenya: It is believed to have originated in Ethiopia and spread through Kenya, Somali, Uganda, Tanzania, Zimbabwe, Zambia, South Africa and Yemen (Numan, 2004). Miraa is an important part of the Economy of many producer countries, particularly Somali, Kenya and Yemen. In Kenya and Ethiopia, Miraa is grown in export quantities. It is Ethiopia’s fourth largest export and is widely accepted for recreational purposes (Kennedy, 1987). In Yemen, over 33% of gross National Product is associated with the cultivation, consumption and exportation of Miraa (Numan 2004)). Miraa harvest is usually transported packed into bundles and wrapped in plastic bags or banana leaves to retain moisture and freshness. Miraa must be chewed while it is fresh, and is usually wrapped immediately after picking to preserve its potency (Thiringi 2001). In Kenya, Miraa is legally grown in three regions, Kerio Valley in the Rift valley province, Embu, and Nyambene hills in Eastern province. The best quality of Miraa comes from Nyambene hills in Meru North district, which is the leading district in ‘Miraa’ (‘Khat’) growing in Kenya (Thiringi 2001). The crop is concentrated in some parts of the district and is a major source of income. Although the crop, like others, is faced with the problem of fluctuating prices at different seasons, the crop earns higher returns relative to others. This has helped the local population growing the crop to improve their living standards. The crop has however, negatively affected the community as many children dropout of school to assist their parents in the business (Neil 2004).

The Miraa twigs are normally tender and users chew the outer cover or its. The bark is bitter but for those who like the product, the bitter taste is associated with quality (Thiringi 2001). Sometimes chewers take tea or soft drinks/soda or use sweets while chewing. Miraa chewing has no side effects, however, it has been known to decrease appetite and increase alertness (Kassie 2001). Miraa chewing decreases the urge for great amount of alcohol. The main groups of users of Miraa in Kenya include; truck drivers, people who run kiosks, bars, hotels that stay open all day and night, university and college students have also been known to consume the product Traditionally, Miraa was only chewed on special occasions and only by the old men. Miraa plays a vital role in the traditional and cultural roles among the Ameru, especially during marriages. Today the young and old including women chew Miraa (Thiringi 2001).

**Trade and the society**

According to the oxford dictionary, trade is defined as the voluntary exchange of goods, services, or both. A mechanism that allows trade is called a market (Kibera, 1998). The original form of trade was barter, the direct exchange of goods and services. In the modern trade, traders
generally negotiate through a medium of exchange, such as money. As a result, buying can be separated from selling, or earnings. The invention of money (and later credit, paper money and non-physical money) greatly simplified and promoted trade (Glyn, 2002). Trade between two traders is called bilateral trade, while trade between more than two traders is called multilateral trade. According to Singh, (2005), trade is an economic activity. An economic activity is one that is intended in improving the well-being of the society as well as creating wealth. Adam Smith referred economics as the science of wealth involving the acquisition of riches and money. It involves both the study of material acquisition and the human welfare. Robbins (1931) defined economics as the study of human behavior as a relationship between ends of scarce means which have alternative uses. Wealth acquisition takes place through an economic system. Singh, (2005) argues that an economic system is the institutional arrangement adapted for solving economic problems. The principal objective of an economic system is to satisfactorily define what combination of good and success will yield the maximum satisfaction, how the choice of alternatives is made, and how the goods and services will be distributed and amongst which section of the economy.

Agricultural Trade in Kenya

From the earlier discussion, miraa has been defined as a horticultural product. This means that its trade is classified under the agricultural category. Below is a brief discussion of the nature of the agricultural trade in Kenya as developing country. Kenyan exports are dominated by agricultural commodities, particularly tea, coffee, pyrethrum and horticultural products (flowers, fruit and vegetables), which represent around 60 percent of total exports (Kibera, 1998). Therefore, fluctuations in climatic conditions and in world prices of these commodities strongly affect export earnings. The share of agricultural products in total merchandise exports has been stable since 1993. Three commodities; tea, coffee and horticultural products (Miraa included) accounted for more than 75 percent of total agricultural exports in 1998, with tea alone making up more than 45 percent of this (Kibera, 1998). Total agricultural exports were on a rising trend over the 10-year period 1985-95, more than doubling from the beginning to the end of the period (from US$685 million to US$1 384 million). Up to 1994 the increase was at the impressive linear rate of US$25 million per year. The growth was particularly marked during 1992-95, after which it stabilized. The average value of exports in 1995-98 was 46 percent higher than in 1990-94, as well as 27 percent higher than the extrapolated trend value (Kibera, 1998).

Growth in agriculture has a disproportionately positive effect on poverty reduction, because more than half the population in developing countries lives in rural areas, and poverty is highest in rural areas (Bourguignon, 2005). Available evidence indicates that Kenya used to spend about 10% of its total government budget on agriculture in the 1980s but this dropped to about 5% in 1990s (Nyangito, 1999). Kenyan horticultural exports have grown at over 6 percent per year for the past 30 years. Since 1974 the value of Kenya’s horticultural exports has increased fourfold in
constant dollar terms, reaching US$167 million in 2000. As a result, horticulture has become the third largest source of foreign exchange after tourism and tea (Ngigi & Minot 2004). More than 25,000 small farmers (about 3,000 being miraa farmers) participate in the sector, accounting for over half of Kenyan horticultural exports. Driven largely by private traders responding to international market opportunities, the growth of the Kenyan fruit and vegetable sector has not been a smooth, continuous process. Rather, the sector has expanded in fits and starts, with numerous changes in the commodity mix and types of marketing institutions (Ngigi & Minot 2004).

**Economic Effects**

Lack of a policy framework to promote and regulate the industry, is a situation that has created an authority and responsibility vacuum as to the conduct and practice in the Miraa industry. The industry is run on the free flow with the fittest surviving. Survival is determined by the amount of money one has and his or her ability to ‘squeeze’ the farmers to sell their produce at throwaway prices. Farmers have no say on the trade and the industry is in the hands of exporters (Kimathi 2003). Miraa in Kenya is traded under an absolute buyer controlled market, which has resulted in a cartel with ‘mafia like’ tendencies. The largest Miraa exporters controlling the Kenyan Miraa are said to be of Somali origin and using their Miraa fortunes to fan the war in Somalia (UN Report 2003). Preliminary research has also shown that child labour has been a great problem in the district as a result of young boys running away from school to participate in the Miraa trade. The easy acquired riches have also encouraged men into abuse of beer hence leading to domestic violence (Kimathi 2006).

According to the chairman NYAMITA, miraa brings into the country $ 250 million annually. This therefore makes it a substantial foreign exchange earner for the country. The produce is exported to South Africa, United Kingdom, Holland, Sweden, Germany, Saudi Arabia, among others. However, some of these countries have raised concerns about the legality of the trade whereas others have already legalized the miraa trade in their countries, hence posing a major threat to traders (Wrong 2005).

**Social Cultural Effects of Miraa Trade**

According to Kalix (1992), individuals commonly divert their income into Miraa chewing, neglecting their families’ needs. The average family income can sometimes be halved to support the habit. Miraa has furthermore been implicated as a causal factor for family instability, divorce, encouragement of prostitution and criminal behavior. Numan (2004) argues that most men, especially of Somali origin, may sell their vital assets such as a vehicle, or clothing in order to afford the substance (Miraa). Nationally, diversion of resources towards the production or importation and marketing of Miraa has a negative impact on the economies of Miraa consuming.
countries. Numan, 2004) estimates that in cities of Somalia and Yemen a consumer spends about 25% of his daily earnings on Miraa. The cultivation of Miraa results in the decreased production of other more essential crops like cereals, promoting malnutrition and disease (Thiringi, 2001). It also leads to low productivity due to absenteeism and the after-effect of its use. At the same time, it is a major source of revenue.

Through globalization and trade liberalization, the production, distribution and exchange of miraa has spread to other parts of the world. Guantai (1980) makes the distinction between culturally integrated and culturally less-interpreted drug use, believing this to be of greater importance to deviant behavior related to drugs than is the nature of the Drug itself. A parallel may be drawn to the use of Miraa in the UK as opposed to the country of origin, such dislocation setting the scene for a more divert pattern of drug abuse. In the above cases, the pattern of Miraa and alcohol abuse was very important to the culturally accepted pattern, with the drug often being taken alone and thereby no longer function as a means of facilitating social interchange. This estrangement of these individuals from their home country, where the Miraa habit is subject to identifiable rules, may have placed these groups at an increased risk from the detrimental effects of Miraa use. Giannin and Castellani (1982) reinforce this view, stating that, first, the customary importance of usages in the culture of origin tend to limit the amount of drug used daily and secondly, Miraa chewing is condoned in such countries and is thus done in a social context which gives positive reinforcement and meaning to the experience. Such behavior can be attributed to commercialization of the commodity, which enhances the availability of the commodity worldwide hence affecting their socio-cultural practices.

**Legal Aspect of Miraa trade**

In the past, more than one country has prohibited or restricted its use (Neil, 2004). Possession or use of Miraa is not presently restricted in the UK, Kenya, Yemen, Somalia, Ethiopia, Djibouti, Sudan, Israel, Madagascar, South Arabia and South Africa. However, it is illegal in some other countries, and people are arrested and prosecuted for carrying Miraa (Neil 2004). The trade and usage of Miraa in Great Britain is presently not illegal, and it is known that there is a market and distribution network for the product, with its substantial use in certain locations estimate that extremely large numbers of the Somali community in London use Miraa (Nyabonyi 2001). Kalix (1992) states that European countries have relatively little to fear from Miraa owing to its unattractive ‘goat-like’ mode of consumption and its relatively low potency, as well as the difficulty involved in extracting cathenon. Mayberry et al (1984), on the other hand, believes that its use will become more extensive as the second generations of those ethnic minorities accustomed to its use become integrated into western society. They also point out that with the development of air travel, fresh Miraa leaves can be distributed rapidly, thereby making Miraa readily available in the west.
RESEARCH METHODOLOGY

Research design

This research was a descriptive survey to establish the effects of ‘Miraa’ commercialization by the farmers in Meru North district.

Target Population

The target population will be all Miraa farmers in Meru North District. Among these, about 70% come from five locations: Kaelo, Athiru, Muringene, Gichanine, kathelwa, and Muutine.

Sample and Sampling Design

To be able to get information from a cross section of farmers in Meru North district, cluster sampling will be used in order to ensure representation of a wide range of farmers. The farmers in the district will be divided based on productivity, ranging from the most productive to the least productive regions. The clusters will include: Kaelo, Athiru, Muringene, Gichanine, kathelwa, and Muutine. (Meru North District Development Plan, 2003-2008). Twenty (20) respondents from each location will be randomly selected through convenient sampling from each cluster, making a total of 120 respondents.

Data Collection

Primary data will be used in this study and reference to secondary data will be made where necessary. A simple structured questionnaire will be used to collect data (Appendix I). The questionnaires will be administered with the help of two research assistants. Personal interviews will be used to ensure high response rate. The questionnaire contains three parts: Part A will seek to capture data relating to respondent demographics, Part B will test the economic aspect of Miraa in Meru North district while Part C will seek to test the various health, social, cultural, economic and legal effects of Miraa trade as perceived by the farmers. The researcher will first pre-test the questionnaire with a few respondents. This will help to fine-tune the questionnaires and justify their relevance in collecting the intended data.

Data Analysis

Data collected will first be edited to detect errors and omissions and where necessary, the respondents will be re-contacted to clarify any vague information detected. After editing, content analysis will be done to interpret and summarize open-ended questions. SPSS (Statistical
Program for Social Scientists) will aid the analysis process. Descriptive statistics such as measures of central tendency and measures of dispersion will be used to determine the effects of Miraa trade in the region. Data will be presented using frequency tables and pie charts.

RESEARCH RESULTS

Economic effects of Miraa trade

The findings in this section were meant to bring out the extent to which Miraa trade affects the farmers economically. This was aimed at achieving the first objective of the study which seeks to establish the economic effects of Miraa trade among farmers in Meru North district. In testing the economic effect of a certain activity, it is necessary to measure and compare the economic situations of the subjects before and after the activity (Singh, 2003).

In order to determine this, this study was seeking to measure the changes in farmers’ economic changes in the last ten years.

Market

Miraa trade market has tremendously increased worldwide (Mwenda, 2003). However, according to the results of this study, irrespective of the market growth, majority of the farmers sell their produce within the local market. When asked where they usually sold their produce, 63% of the farmers responded that they sell within their local division, 12% went to the nearest local markets, and 8% moved their produce to other parts of the country while 17% exported their produce to East African countries, South Africa, United Kingdom, and other European countries.

Price

The other economic variable tested was the price of Miraa produce. As argued earlier in chapter two, the price of Miraa is extremely elastic. The changes in the price level were attributed to various factors. Top in the list was the change in climatic conditions. Majority of the farmers argued that during the dry season, the supply of the commodity drastically fell leading to increase in price due to high demand. On the other hand, during the rainy seasons, surplus of the commodity led to decrease in prices. This is in line with the economic principle of demand and supply. The other factor that led to changes in price level was improvement in infrastructure, which led to easy access to various markets. For example, by use of mobile phone, the farmers were able to get up to date information about the price of Miraa in all parts of the country, hence being able to determine where and when to sell their produce. Other factors included; diseases
and pests, international restrictions to Miraa trade, immigration, foreign exchange rate among others.

Social cultural effects of Miraa trade

The study established that Miraa trade had various social cultural effects to the farmers. These included both positive and negative effects. The farmers were asked to rate each of the social cultural aspects discussed below using a 5 point likert type scale, with 5 representing strong agreement with the statement and 1 representing strong disagreement with the statement. Therefore, this means that any statement with an average mean of more than three points was agreed by majority of the respondents. On the other hand, those statements with a mean score of less than three shows that Majority of the respondents disagreed with the statement.

Table 1: Socio-cultural effects of Miraa trade

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<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miraa trade led to Reduced Poverty</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>4.44</td>
</tr>
<tr>
<td>Miraa Trade led to Increased child Labour</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>4.44</td>
</tr>
<tr>
<td>Miraa trade led to Increased HIV AIDS Cases</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>4.16</td>
</tr>
<tr>
<td>Miraa Trade led to Increase of Foreigners in the region</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>4.15</td>
</tr>
<tr>
<td>Miraa Trade led to Increased School Drop out</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.96</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Early Marriages</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.82</td>
</tr>
<tr>
<td>Miraa Trade led to Increased adventurous Experiences e.g traveling</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.81</td>
</tr>
<tr>
<td>Miraa Trade led to increased Immorality</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.8</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Domestic Violence.</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.54</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Illegal arms in the area</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.46</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Polygamous families</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.28</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Crime</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.23</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Rebellion from Church</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.14</td>
</tr>
<tr>
<td>Miraa Trade led to Population Growth in the region</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>2.38</td>
</tr>
<tr>
<td>Miraa Trade led to Increased Divorce Rate</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>2.12</td>
</tr>
<tr>
<td>Miraa Trade led to weakened Child- Parent relationships</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>1.92</td>
</tr>
</tbody>
</table>

The results in table 1 above shows that majority of the respondents strongly agreed that Miraa trade; Reduced poverty level in the region, led to increase in child labour, led to increase in spread of HIV Aids, increase of foreigners in the region, increased school dropout, and early marriages. The respondents also agreed to some extent that miraa trade led to; increased
adventurous experiences, immorality, domestic violence, illegal arms, crime and rebellion from the church.

Below is a discussion of responses to some of the statements above:

**Miraa trade has led to reduced poverty level**

Majority of the respondents strongly agreed that Miraa trade had contributed to reduced poverty level in Meru North region. Findings show that 62% of the respondents strongly agreed that Miraa trade had led to reduction in poverty level in the region. Only 3% of the respondents felt the miraa trade had not led to reduced poverty level while 12% were indifferent.

**Miraa trade has led to increased child Labour**

Majority of the respondents strongly agreed that miraa trade had led to an increase of child labour, which is a negative socio-cultural effect. 85% of the respondents agreed that Miraa trade had strongly contributed to child labour. 9% of the respondents were indifferent while 6% supported that Miraa trade had not contributed to increased child labour in the region.

**Miraa trade had led to increase in the spread on HIV AIDS**

Majority of the respondents strongly agreed that Miraa trade had contributed to high spread of HIV Aids due to the immoral behavior as a result of increased income and exposure. Results show that 51% of the respondents strongly agreed that miraa trade led to increase in the spread of HIV Aids in the region, 21% agreed to some extent, 21% were indifferent and lastly only 7% disagreed to some extent.

**Miraa Trade led to Increased School Drop out**

School drop out rate has been a common phenomenon in Meru North district. According the farmers, this had been highly caused by Miraa trade in the region. The findings show that 30% of the respondents strongly agreed that Miraa trade had led to increased school drop out. 46% of the respondents agreed with the statement to some extent while 2% strongly disagreed with the statement. On the other hand, Farmers strongly disagreed that Miraa trade had led to weakened parent-child relationship, increased divorce rate and increased population growth.
Miraa trade has led to weakened Child-Parent relationships

The respondents were asked whether they agree to the statement that Miraa trade had led to weak child-parent relationship. Findings show that majority of the respondents (52%) strongly disagreed with the statement Miraa trade had led to weakened parent-child relationships in the region. They argued that Miraa trade did not affect the relationship between parents and their children.

Miraa trade has led increased to Population Growth

The respondents were asked the extent to which they agreed with the statement that Miraa trade had led to increase in population in the region. The findings were as summarized in the table below. Findings show that majority of the respondents (60%) disagreed with the statement that Miraa trade had led to an increase in population growth in the region. 7% strongly agreed that the trade had contributed to increase in population growth with 13% being indifferent. 20% agreed to some extent with the statement.

Miraa trade has led to increase in divorce cases in the region

According to a family planning report of 2001, there was an increase in divorce case in the region. However, the findings show that Miraa trade was rated as not one of the factors contributing to the situation. The respondents were asked whether they agreed with the statement that Miraa trade had contributed to increase in Divorce cases in the region. Findings show that 38% of the respondents strongly disagreed that Miraa trade had led to increase in divorce cases in the region with 32% agreeing to some extent with the statement. Only 2% strongly supported the statement.

Development related Effects of Miraa trade

In this section, the respondents were asked the extent to which they agreed or disagreed with various statements relating to development related effects of Miraa trade. Findings (table 2) show that the respondents agreed with all the statements presented to some extent. This is because all the statement had a mean score of more than 3.00. Where 3.00 points represents a neutral state i.e neither agree nor disagree.
### Table 2: Development related Effects of Miraa trade

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miraa Trade has enhanced Technological Development</td>
<td>100</td>
<td>2</td>
<td>5</td>
<td>4.48</td>
</tr>
<tr>
<td>Miraa Trade has led to improved living Standards</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>4.29</td>
</tr>
<tr>
<td>Miraa Trade has spurred growth of Urban Centres in the region</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.85</td>
</tr>
<tr>
<td>Miraa Trade has led to Exposure to Foreign Cultures</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.83</td>
</tr>
<tr>
<td>Miraa Trade has led to improved Infrastructure</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.65</td>
</tr>
<tr>
<td>Miraa Trade Has Helped Create Jobs</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.48</td>
</tr>
<tr>
<td>Miraa Trade Improves Peoples Social Status</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.41</td>
</tr>
<tr>
<td>Miraa Trade Has Availed Foreign Currency</td>
<td>100</td>
<td>1</td>
<td>5</td>
<td>3.15</td>
</tr>
</tbody>
</table>

**Miraa Trade Helped Technological Development**

The respondents were asked the extent to which they agreed or disagreed with the statement that Miraa trade had enhanced technological development in the region. Majority of the respondents strongly agreed with the statement, with only 4% disagreeing, 6% indifferent and 28% agreeing to some extent.

**Miraa Trade has improved People’s living Standards**

Findings show that majority of the respondents strongly agreed that Miraa trade in the region had improved people’s living standards. A total of 55% of the respondents strongly agreed, 32% agreed to some extent, 3% were indifferent, while 10% disagreed.

**Miraa Trade has spurred growth of Urban Centers**

In the recent past, Meru North district has experienced a high increase in trading centers. The findings show that this development has been as a result Miraa trade. A total of 71% of the respondents agreed that the high growth of trading centers has been enhanced by Miraa trade.

**Miraa Trade Has Helped Create Jobs**

The respondents were asked the extent to which they felt that Miraa trade had helped in creating jobs. A simple majority (57%) agreed with the statement while 30% disagreed.
DISCUSSION OF FINDINGS

The study aimed at establishing the effects of Miraa trade on farmers in Meru North district of Eastern province in Kenya. Specifically, the study was aimed at establishing the economic effects, socio-cultural effects, and the development related effects of Miraa trade in the district.

The study has revealed that majority of the farmers are aged between 40 and 79 Years (77%). This can be attributed to the fact that according to most of the African cultures, land is inherited. This means that when a generation grows old, they leave the land to the younger generation. The study has established that out of 100 respondents, only two and one were aged below 25 years and above 100 years respectively. The former have not attained the age of inheritance while the latter have given out the land to their children.

Moreover, the findings show that majority of the farmers (86%) were males. This can also be attributed to the African culture belief that women do not own property such as land. Out of the fourteen women respondents interviewed, eight of them had purchased the property while four were widows. Only 2% of the women had inherited land from their parents. The study has further established that majority of the farmers in the region were illiterates. This was evidenced by the fact that 36% of the farmers had no formal education and 24% were educated only up to primary level and sold their produce at the local market. Only 2% had attained university education and they exported their produce outside the country. Further research revealed that majority of the farmers (52%) had inherited the land from their parents. According to an interview by one of the farmers, selling of land was a taboo to the community and one would receive a curse if he committed the crime. The findings have revealed that 60% of the farmers depended on Miraa alone as a source of income, although some had diversified to poultry and livestock farming. However, majority of those involved in other farming activities were those with less than one acre of land. The study has further revealed that Miraa trade has affected the respondents both socially and culturally.

CONCLUSION

From the above discussion, it is evident that Miraa trade adversely affects farmers in many aspects. These are both positive and negative. Positively, the practice has improved the farmers’ living standards by being a major income earner in the region. Over 60% of the farmers depend on Miraa as the only source of income. Socially, Miraa trade has contributed to reduction in poverty levels. This has seen Ntonyiri constituency to be the least poor constituency in Eastern Province, according to recent poverty study by the government. The trade has had various negative effects to the community including increase in child labor, increase in spread of HIV AIDS, increased immorality, increase in school dropout, increase of illegal arms in the region hence leading to insecurity, increase in early mirage cases among others.
RECOMMENDATIONS

Farmers - the farmers the region should take drastic steps in ensuring that they are able to control the trade so as to avoid being exploited by foreigners and middlemen. This is based on the fact that majority of the farmers sell their produce to the traders at the local market. It would be beneficial for the farmers to work as a team that would mutually benefit them. The government should take a step to regulate the trade so as protect the indigenous farmers from being exploited by unscrupulous traders. The government should also engage in activities that would enlighten the farmers on how to use the returns from the produce. This is because most of these earnings are misused due to lack of knowledge. The banks and other financial institutions should target the region by offering attractive services that would attract the farmers. There is a lot of money in the region hence posing a possible target market for the banks.

REFERENCES


Kokwaro, J (2000); Medicinal plants of East Africa, Journal of Pharmacy and Pharmacology 35, 962-963


Nyamita (2006) Articles on Miraa in Meru North district


