

Farmers' perceptions towards khat (*muguka*) in Mbeere South Sub-County, Embu County, Kenya

Faith Mukami Ngari¹
Eric R. Masese²
Francis O. Barasa³

¹fngari@karu.ac.ke/ngamingari@gmail.com

^{1,2,3}Moi University, Kenya

Recommended Reference: Ngari, F. M., Masese, E. R., & Barasa, F. O. (2025). Farmers' perceptions towards khat (*muguka*) in Mbeere South Sub-County, Embu County, Kenya. *African Quarterly Social Science Review*, 2(4), 500–515.
<https://doi.org/10.51867/AQSSR.2.4.47>

ABSTRACT

Khat (*muguka*) is one of the crops in Kenya, which elicits much debate because, on one hand, it is considered a drug of dependence and is also blamed for many other social evils. On the other hand, it is a crop that has both economic and cultural value. Despite the largely publicised social evils associated with it as a crop, smallholders are increasingly embracing its cultivation in the study area. However, little is known about how they perceive it so as to embrace it amidst the controversies. Therefore, this study investigated the farmers' perceptions towards *muguka* in Mbeere South sub-County, Embu County, Kenya. It was guided by the social constructionism theory, which observes that humans construct social reality through externalisation, objectivation and internalisation. The study was qualitative and cross-sectional. The target population was all the *muguka*-producing households in the study area. A non-probability sampling technique was employed to select the *muguka*-producing households. Specifically, purposive sampling was used to arrive at a sample size of 112 households, and this was determined through saturation. Thus, a semi-structured interview schedule was used to collect data from the 112 households. Purposive sampling was also used to select the 15 key informants and the participants of the 3 focus group discussions. Qualitative data was analysed using thematic analysis and was presented using direct quotations and narratives. The results showed that *muguka* was perceived as money (*mbia*), help (*útethio*), employer (*mwandíkani*), business (*mbiacara*) and coffee or tea (*kaúwa kana manjani*). The study thus concluded that *muguka* was perceived favourably by the farmers due to the economic benefits since it was not food and did not have a place in the Mbeere traditions, and that was why they embraced its cultivation. This was because its cultivation provided farmers and non-farmers with opportunities for earning income that was used to acquire assets, educate children, start small-scale businesses and meet all other household needs, including food needs, thus reducing hunger and poverty in the area since most of the people in the area were not in formal employment. Even though they perceived it favourably, its cultivation was blamed on other social evils such as school dropouts, early marriages, young men's deaths, negative health effects, alcoholism and prostitution, among others. Others indicated that they cultivated it largely because they lacked other alternatives since Mbeere is a dryland and there was no water for irrigation. This study, therefore, recommends that the people of Mbeere South sub-County be provided with water for irrigation so that they can engage in the farming of other crops that would serve as both food and cash crops, most of which are not surrounded by controversies. It also recommends that intensive campaigns promoting the importance of education be carried out and training on financial management be offered to reduce the misappropriation of proceeds through excessive drinking of alcohol and prostitution.

Keywords: Farmers, Households, Income, Khat, Muguka, Perception

I. INTRODUCTION

Khat is an evergreen plant that is cultivated as a bush or small trees (Omar *et al.*, 2020). It is grown for the production of young leaves and tender twigs which are chewed for their stimulating effects (Feyisa & Aune, 2003). Khat is one of the crops in Kenya which elicits much debate because on one hand, it is considered a drug of dependence and is also blamed on many other societal evils and on the other hand, it is a crop that has both economic and cultural value. To start with, in 1980, the World Health Organization (WHO) classified khat as a drug of abuse that can produce mild to moderate psychological dependence (Hendricks & Radwa, 2018). Thus, medically, khat is viewed as a drug whose major active ingredients are Cathinone and Cathine. Cathine is a Schedule IV stimulant, and Cathinone is a Scheduled 1 stimulant under the controlled substances Act, meaning that it has a high potential for abuse (Silva *et al.*, 2022). As a drug, chewing it, is associated with a number of health related complications that includes; increased blood pressure, tachycardia, insomnia, anorexia, gastritis, stomatitis, oesophagitis, gastric ulcers, hemorrhoids, constipation, general malaise, irritability, migraine headaches, cardiovascular complications, loss of appetite and impaired sexual potency in men (Al-Motarreb *et al.*, 2002; Hassan *et al.*, 2005; Luqman & Danowski, 1976; Nencini & Ahmed, 1989). Additionally, when chewed by pregnant women it impairs growth of foetus by inhibiting utero-placental blood flow (Mwenda *et al.*, 2003).

However, though khat use is associated with negative health effects, evidence shows that it is ranked by consumers as a mild stimulant and not a hard drug (Anderson *et al.*, 2007). In addition, Griffiths *et al.* (1997) in a study of khat use by Somali immigrants in the United Kingdom observe that medical problems associated with khat are rare. Pennings *et al.* (2008) also indicate that the abuse potential as well as dependence of khat is low and there is no strong evidence for a causal relationship between use of khat and psychiatric morbidity. Consequently, a report by the WHO Expert Committee on Drug Dependence (ECDD) indicate that the potential for khat abuse and dependence is low and hence not significant to warrant international control (WHO, 2006). The National Campaign Against Drug Abuse [NACADA] opine that most chewers mixed it with other substances such as cigarettes which are known to stimulate the Central Nervous System while other chewers used sugared menthol or pieces of sugar and cardamom among others to improve the bitter taste of khat (NACADA, 2013). Thus, since khat was chewed along other substances it was difficult to conclude on the health effects of chewing it.

In addition, khat is blamed for other societal evils. In instances where its production replaces food crop production, it undermines household food security whereby the households' largely relies on the market for food and in instances where the food prices go up, the household may not afford (Feyisa & Aune, 2003 and Bulos, 2021). Additionally, in the non-growing areas, chewers spend money on khat instead of using it to feed their families (Bulos, 2021). Further, sitting to chew khat for long hours, wastes a lot of time which would have been used in other productive activities (Bulos, 2021). Further, Mukami (2014) observes that school interruptions are noted in the khat growing areas. Lower retention rates of both boys and girls are observed, absenteeism is noted as children fail to attend school to participate in khat production activities, missing some of the classes as children sneak out from school to engage in the khat production activities, difficulty concentrating in class since some children doze as a result of waking up very early to pick khat, and others drop out of school altogether (Mukami, 2014). In addition, khat is also blamed for change in attitudes towards schooling where there is general disregard for education since its returns are long term and disregard for teachers who are seen to earn less compared to the khat farmers and dealers. Khat is also blamed for increasing child labour, early marriages and parental/guardian neglect among others (Mukami, 2014).

On the other hand, khat is of great economic importance. It earns revenues for the governments in the producing countries. In Yemen, since khat is produced and consumed locally, the government benefits through domestic tax as it is transported from one place to another (Bulos, 2021). In Ethiopia, khat is exported earning the government foreign exchange (Terefe, 2020) and a lot is still traded domestically, thus domestic tax is collected at different regional and zonal levels which augments the total export tax collection revenue (Feyisa & Aune, 2003). In Kenya, *míraa* – khat variant cultivated in Meru County – is exported and earns foreign exchange (Muchui, 2019). It is also traded locally in major towns also earning domestic tax. In addition, khat earns income to the farmers who directly cultivate it in their farms. It also creates job opportunities for earning income to the traders, middlemen, businessmen, transporters (Carrier & Klantschnig, 2012). Further, once khat is sold, it increases household income, and that income can be used to buy food improving household food security (Gezon, 2012).

In addition, khat has cultural significance to the communities that cultivate and use it. In Yemen, khat is used in festivals and weddings among other events (Bulos, 2021). In Ethiopia, cultural ceremonies such as births, naming ceremonies, marriages and funerals were celebrated by chewing khat (Carrier & Klantschnig, 2012). It was also used in religious festivals such as meditation and worship (Carrier & Klantschnig, 2012). The traditional healers used khat to heal various ailments (Yeshigeta & Abraham, 2004). In Kenya, the Tigania and Igembe of Meru County have much pride in the crop because of its place in their traditions (Bururia & Nyaga, 2014). For instance, a bundle of *míraa* serves as a marriage proposal and engagement (Bururia & Nyaga, 2014). In preparation for circumcision, the candidate gives a bundle of *míraa* to the man of his choice who then agrees to serve as his guardian father during the seclusion period (Bururia & Nyaga, 2014).

Even though khat use is associated with negative health effects and its use and production is associated with other societal evils, *muguka* - a khat variant - production is rapidly increasing in Embu County, especially in Mbeere South sub-County. Notwithstanding its advantages such as its economic importance, *muguka* farmers often face significant obstacles such as bans and threats to ban and higher taxes in some Counties. Its marketability is hampered by the social stigma and unfavourable opinions attached to it, mostly because of its psychoactive properties (Mugo, 2025) that causes it to be perceived as a drug. Nevertheless, irrespective of the social stigma and unfavourable opinions attached to it and irrespective of the bans and the threats to ban its production, sale and distribution, *muguka* production continues to be embraced by the small holders. This was why this study sought to find out the farmers' perceptions towards *muguka* since it was a crop surrounded by controversy, but which was widely embraced by the farmers.

1.1 Statement of the Problem

Khat whose major active ingredients are Cathinone and Cathine (Silva *et al.*, 2022) is on one hand, viewed as a drug of dependence that produce mild to moderate psychological dependence (Hendricks & Radwa, 2018). As a drug, chewing it, is associated with a number of health related complications that includes; increased blood pressure,

tachycardia, insomnia, anorexia, gastritis, stomatitis, oesophagitis, gastric ulcers, hemorrhoids, constipation, general malaise, irritability, migraine headaches, cardiovascular complications, loss of appetite and impaired sexual potency in men (Al-Motarreb *et al.*, 2002; Hassan *et al.*, 2005; Luqman & Danowski, 1976; Nencini & Ahmed, 1989) and when chewed by pregnant women it impairs growth of foetus by inhibiting utero-placental blood flow (Mwenda *et al.*, 2003). Additionally, it is also blamed for many other societal evils such as undermining food security because of reducing area under food crop production and using household income to buy it (Feyisa & Aune, 2003 and Bulos, 2021), increase in school drop out in the growing areas, increased child labour, early marriages and parental neglect (Mukami, 2014). On the other hand, it is a crop of great economic and cultural importance (Carrier, 2005b). Thus, due to the former view, khat is always facing bans and threats to ban which hinders its production, sale and distribution. Despite the controversies surrounding khat, *muguka* production is on the increase in Mbeere South sub-County whereby many small holders have ventured in its production because of various reasons including economic returns. However, few studies have explored how the farmers in the area perceive it, since their perceptions are likely to inform its adoption.

1.2 Research Objective

The research objective was, to find out the farmers' perceptions towards *muguka* as a crop in Mbeere South sub-County, Embu County, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study employs Berger and Luckmann (1966) social constructionism theory. Their conceptualization challenges the notion of an inherently objective reality. Thus according to their argument, reality is not something that exists independently of human beings but is instead created through social interactions and shared meanings. In their work, Berger and Luckmann propose that humans construct social reality through the process of externalization, objectivation and internalization. Externalization according to Berger and Luckmann is 'the ongoing outpouring of human being into the world, both in the physical and the mental activity of men.' During externalization, humans project their subjective meanings onto the world through their activities and creations. Thus, externalization is the way in which individuals create cultural products through social interaction. For instance, the creation of language, exemplifies externalization of humans' thoughts and experiences by developing words and grammatical structures to represent them.

Objectivation is the process whereby the externalized products of human activity attain the character of objectivity. Thus, through objectivation, externalized human products acquire an apparent objective reality, seeming to exist independently of their human creators (Berger & Luckmann, 1966). For instance, language, norms, values, and institutions like marriage and government come to be seen as natural and permanent even though they are socially created. Consequently, internalization is the immediate apprehension or interpretation of an objective event as expressing meaning (Berger & Luckmann, 1966), a process contemporary scholars link to the ongoing construction of identity and collective meaning in social contexts (Joas & Knöbl, 2022; Vandenberghe, 2019). During this process, individuals reincorporate the now seemingly objective social world into their subjective consciousness. For instance, individuals accept the socially constructed norms and values as part of their own reality guiding their behaviours and shaping their identities. In addition, with regard to internalization of gender roles, children observe and internalize socially constructed ideas about appropriate behavior for men and women, often accepting these roles as natural and inevitable rather than as products of social interaction.

2.2 Perceptions towards Khat as a Crop

2.2.1 Khat is a Drug

The view towards khat is controversial. On one hand it is viewed as drug. The World Health Organization (WHO) classified it in 1980 as a drug of abuse that can produce psychological dependence (Hendricks & Radwa, 2018). However, Al-Mugahed (2008) observes that the WHO does not consider khat addiction to be a serious problem. This controversial status is what leads to khat being legal and illegal in some countries. For instance, khat is a specifically controlled substance in some countries including Canada, Germany, the United Kingdom and the United States. On the other hand, khat is legal in Djibouti, Kenya, Uganda, Ethiopia, Somalia, Sudan and Yemen (Cox & Rampes; 2003 and Manghi *et al.*, 2009). Additionally, its status of being a drug raises concern and thus it receives a different kind of scrutiny than other crops, one that is often tinged with what Warfa *et al.*, (2007) call 'moral panic' due to fears of its effects on individual and social health. Thus, in the community there are those who embrace it and there are those who do not embrace it because of various reasons. Nevertheless, khat still tends to be singled out for scrutiny based on emotional reactions against its status as a recreational drug. In Madagascar for instance, many people especially those with a relatively high amount of Western education, those from a different part of the country, or the relatively wealthy-disdain khat (Gezon, 2012).

2.2.2 Khat is a Cash Crop

On the other hand, it is viewed as a cash crop which brings substantial returns to the farmers. Poulton *et al.*, (2001) observes that crops that are cultivated entirely for the market are known as cash crops. The plant is less vulnerable to drought with less cost for labor demand throughout its production (Girma & Challa, 2021). Khat is a non-food cash crop like that of cotton, tobacco, tea, coffee and cacao among others but that is worth cultivating for its benefits to farmers' livelihood (Dessie, 2015). It is thus viewed as an avenue of earning economic resources. Gebissa (2008) asserts that khat as a shrub was Ethiopia's predominant cash crop which had moved from being a shrub grown for domestic consumption and from a substance that was being chewed during religious and cultural occasions to become a visible and pervasive social habit. It had also moved from a product sold in local markets to the most profitable commodity (Gebissa, 2008). Mwenda *et al.*, (2003) also asserts that in Kenya khat is also viewed as a cash crop of immense economic value. Khat as pointed out by Carrier (2005a); Carrier (2005b) and Klein and Oni (2009) is an outstanding cash crop, very profitable to farmers as it is grown for the local market as well as for the export market. As a cash crop khat is popularly known as the 'green gold' of Nyambene (Bururia & Nyaga, 2014; Njeru & Mwangi, 2013). Consequently, Mugendi (2017) indicates that khat growers for instance, earn around five times more cash crop income than non-khat growers. This amount is far much higher compared to the market price of the main crops grown in the greater Mbeere sub-County (Mugendi, 2017).

2.2.3 Khat is an Employer

Further, Dessie (2013), in a study that was carried out among the learned Ethiopians asserts that khat is an employer because of the large numbers of producers –farmers - it employs. Girma and Challa (2021) also observe that khat serves as an employment opportunity. As an employer, it was a source of income in its production activities and in the marketing processes (Girma & Challa, 2021). Gebissa (2008) also observes that khat trade involves millions of farmers, traders and other service providers in the Horn of Africa and the Arabian Peninsula. Carrier and Klantschnig (2012) observe that khat also provides employment to many people; farmers, middle men, businessmen, and transporters. In addition, Goldsmith (1998) indicates that khat trade has created many jobs not only for local people living in the growing areas but also others who have migrated to the area due to its potentiality in business. The income from khat trade locally is used basically for construction of schools, churches and other community projects (Goldsmith, 1998). In a way therefore, this trade is the major economic contributor to the development of the region. Further, khat can undoubtedly be said to be an integral part of Mbeere's economy as many people have built their lives around it. Those who have been able to make good use of the money got from khat have admirable lives. They have been able to educate their children and build good houses (Ngari, 2011). A majority of the Mbeere people view the introduction of khat as a blessing since those involved in the trade are able to earn a living.

2.2.4 Khat is a Stimulant which is socially and culturally valued

Gebissa (2004) point out that khat is a valued crop because of its critical role in such productive activities as work, cultural ceremonies, meditation and worship. It was also seen as a medium of social interaction (Gebissa, 2004). Gebissa (2004) opined that typical farmers in Hararghe for instance, between 8:00 am to 9:00 am walked into their khat orchards and settled down with other men belonging to the family or those from the neighbourhood for the morning chew session locally known as the *igbana* which means the eye opener which lasts for about an hour. During this period, only a small quantity of khat is chewed for the purpose of achieving the desired state of euphoria for a burst of energy for the work ahead (Gebissa, 2004). The chew session as indicated by Gebissa (2004) is followed by breakfast brought to the field by the farmer's wife. After breakfast, for the next 3 - 4 hours the farmer worked vigorously in his farm preparing seedbeds for planting or shoring up the khat trees, watering, fertilizing, pruning and defoliating depending on the season. However, if khat chewing was not followed by hard labour, it then served as an irritant rather than as a stimulant and was highly disapproved (Gebissa, 2004).

The Oromo of Hararghe in Ethiopia, celebrated births, marriages and religious festivals by chewing khat and on occasions such as funerals and naming ceremonies (Gebissa, 2004). Khat leaves were presented as gifts during the popular *wadaga* ritual; a ceremony of a group prayer performed at times of illness, death or calamity. In the course of the ritual large amounts of khat are consumed by the participants (Gebissa, 2004). Guests are welcomed with it; prayers were kept long and lively with it, in wedding and funeral ceremonies as well as in other social gatherings people were supplied with bundles of the leaves as a matter of course (Gebissa, 2004). Political and religious leaders customary gave visitors khat as a sign of politeness while friends host are expected to provide a handful of the leaves to friends and guests as an indication of hospitality (Gebissa, 2004).

Woldu *et al.*, (2015) also observe that in Eastern Ethiopia, khat also has a considerable social value and a special place in the socio-cultural life of the people. He notes that the most accepted social value of khat is related to religious rites (Woldu *et al.*, 2015). Thus, khat has been used by elder Muslims, Sheikhs and Muslim spiritual scholars. Socially, it is acknowledged to produce excitation, promote social interactions; recreation and past time, as well as banish sleep,

enhance job efficiency, dispel fatigue and suppress hunger (Woldu *et al.*, 2015). Further as noted by Woldu *et al.*, (2015) khat also is known to play a dominant role in all male activities and social celebrations such as marriages, business proceedings, meetings, mourning, weddings and other ceremony as well as collective labour works. The khat ceremony has its own associated services like use of incense, sandal, soft drinks, cigarettes, tea/coffee, sugar and milk.

In Kenya, the Tigania and Igembe have much pride in the crop, emphasizing its place in their traditions (Bururia & Nyaga, 2014). Khat locally referred to as *míraa* is a highly valued crop among the Ameru. Bururia and Nyaga (2014) indicate that culturally *míraa* has a great value as far as the traditional marriage and male circumcision rites are concerned. During traditional marriages, a prospective bridegroom takes a bundle of *míraa* called *ncoolo* in Kimeru language, to the prospective bride who in turn gives to her mother who then gives to the father (Bururia & Nyaga, 2014). This serves as a marriage proposal and engagement. Additionally, in preparation for circumcision the candidate of initiation gives the bundle of *míraa* to the man of his choice who then serves as his guardian father during the seclusion period (Bururia & Nyaga, 2014). Further, Carrier (2005b) observes that *míraa* is incorporated into a 'youth ethos' among the Ameru where it is validated as 'poa' (cool). To them *míraa* is a successful commodity, that is linked to their heritage.

2.2.5 Khat is a God blessed commodity

A research participant, Adem Aliyu Jaylan, as quoted in Gebissa (2004) asserted as follows: 'khat is a tree that is loved by God. It is a tree blessed by Rabi (God) and given to us. This is a tree that man cannot command. A lot of people with power have tried to control it especially the price of selling the leaves. None has succeeded so far. This tree is not just another ordinary plant; it is a leaf of Allah.' Woldu *et al.*, (2015) also support the above observation by indicating that khat was a God blessed commodity given to their locality.

2.2.6 Khat is a Poor Man's Crop, Life saver and Medicinal plant

Additionally, Woldu *et al.* (2015) points out that khat is also regarded as a poor man's crop which required low input and in turn gave high cash output and it did well under small scale management. Khat was also considered a life saver since its harvests were very frequent thus if one had a problem; it would be solved very fast (Woldu *et al.*, 2015). Woldu *et al.*, (2015) also noted that khat was valued as medicinal plant against various ailments including Sexually Transmitted Diseases (STDs).

III. METHODOLOGY

3.1 Study Area

Mbeere (Comprising of Mbeere South sub-County and Mbeere North sub-County) is located in Eastern part of Kenya and lies between Latitudes 0° 20' and 0°50' South and Longitude 37° 16' and 37° 56' East (Kithama *et al.*, 2013). Mbeere South sub-County covers a total area of 1,321.4 Km² (Republic of Kenya, 2005). In addition, Mbeere borders Embu to the Northwest, Tharaka to the North, Mwingi to the East, Machakos to the South and Kirinyaga to the West (Republic of Kenya, 2005). The Kenya Population and Housing Census of 2019 indicate that the Population in Mbeere South sub-County was 163,476 whereby the males were 83,311, the females were 80,159 and 6 were intersex. Additionally, the census indicates that in the sub-County there were 46,065 households with an average size of 3.5. The Mbeere South sub-County hosts the famous seven folk's dams which include: Masinga; Kamburu; Gitaru; Kindaruma and Kiambere. Additionally, the Mwea Game reserve in Embu County is located in Makima, Mbeere South Sub-county.

The Mbeere South Sub-County is characterized by hot and dry weather condition for the greater part of the year. The area receives bimodal pattern of rainfall whereby the long rains comes between March and May and the short rains between October and December, the latter being more reliable. The annual rainfall ranges between 640 to 1,100 millimeters with most parts of the area receiving 550 mm of rainfall per year (Kithama *et al.*, 2013). The rainfall received however is usually not very reliable giving the area a marginal status (MoALF, 2016). The highest percentages of the inhabitants in Mbeere South sub-Counties are the Ambeere followed by the Akamba, the Aembu and the Agikuyu. Christianity as a religion dominates the area even though Islam is also practiced but on a small scale. Mbeere residents are predominantly mixed farmers; with crops cultivated being maize, beans, pigeon peas, green grams, cow peas and sorghum. In addition, the Mbeere residents engage in *muguka* production and it is the second largest producer after Meru (Njiru *et al.*, 2013). Further, some of the people conduct small scale businesses in the area and mostly along the Kiritiri - Siakago road and Kiritiri - Embu Road. These small businesses are mainly sustained by the high turnovers from *muguka* selling.

3.2 Study Design

The study was largely qualitative and cross-sectional. The study was conducted in the field in the natural setting. The research question was answered from different perspectives rather than from a single perspective. This enabled the researcher to deeply explore behaviors, different perspectives and life experiences to discover the complexities of the

situation through a holistic framework (Holloway & Wheeler, 2002). This was because; extensive data collection from multiple sources is the backbone of any qualitative study (Khan 2014). This too assisted to authenticate the research findings. In this study therefore, the researcher used multiple data collecting techniques such as in-depth interviews, key informant interviews, focus group discussions and observation. Consequently, in this research no attempt was made to test a predetermined hypothesis, rather, the aim was to explore flexibly and in detail the area of concern.

3.3 Sampling

In this study, purposive sampling was employed in arriving at the administrative areas. *Muguka* production was the criteria upon which the specific area of study was selected. Mbeere (comprising of Mbeere South sub-County and Mbeere North sub-County) was the second largest khat producing area in Kenya after Nyambene in Meru County (Njiru *et al.*, 2013). Mbeere South sub-County produced *muguka* in large scale than Mbeere North sub-County. Therefore, purposive sampling was used to select Mbeere South sub-County since it had the required characteristics; *muguka* growing households. Further, Mbeere South sub-County has 4 Divisions namely; Gachoka, Mwea, Makima and Kiritiri. Gachoka Division was selected purposively since *muguka* was grown in large scale than in other divisions. Therefore, the target population comprised of all the households in Mbeere South sub-County, Embu County that participated in *muguka* production at the time this study was carried out. The unit of analysis in this study was households that produced *muguka*. Similarly, a non-probability technique was employed to select the *muguka* producing households. Specifically, purposive sampling was used to arrive at a sample size of 112 households and this was determined through saturation. Thus, 112 semi-structured interviews were conducted with household heads. In addition, the key informants and the participants of the Focus Group Discussions were selected purposively.

3.4 Data Collection

Data was collected through conducting 112 in-depth interviews. These were conducted using a semi-structured interview guide. In addition, 15 key informant interviews were conducted with people who were deemed knowledgeable about the phenomena. Further, 3 Focus Group Discussions were conducted. Data was also collected through direct observation and lastly, secondary data was collected from various sources such as; the journals, books, reports and Newspaper articles that were relevant to this study.

3.5 Data Analysis

Qualitative data was analyzed using a technique where the researcher went through all the field notes and interview transcripts severally. Additionally, the researcher listened severally to the Focus Group Discussions proceedings. Transcriptions of FGDs proceedings was also done. The researcher then went through the transcripts severally. This was done to identify the key patterns and major themes that emerged from the study. The major themes that emerged were then coded. After coding, the data was then organized into similar categories. The main themes were then summarized drawing on contextual data and other information that helped to better understand the findings. The qualitative findings were then presented using direct quotations and narratives. All the names that were used in direct quotations and narratives are pseudonyms since the respondents were assured of anonymity.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

In this study, all respondents in the households that were purposively sampled consented to be interviewed showing a 100% response rate. However, since *muguka* is a sensitive crop in the area, in each village visited for the interviews, the researcher was accompanied by a person who was known in the area and this increased acceptance and willingness to participate. Additionally, the researcher cleared all doubts by answering the respondents' questions with regard to the purpose of the research.

4.2 *Muguka* means money (*Mbia*)

Many participants who were involved in the in-depth interviews perceived *muguka* as money locally known as *mbia*. It was perceived as money because households cultivated it purely for sale, it was a crop for earning cash. Most respondents perceived *muguka* as money because they did not chew it and it could not be cooked for household members since it was not food. Mugoiyo, a 40-year-old male, during an in-depth interview in Mbeti South Location observed as follows:

Muguka means money, it is for fetching us money because I don't chew it and no one does in my household. It's just for sale to earn money, which meets all our household needs since we do not get money from anywhere else (Mugoiyo, 19, May 2023).

In addition, Njeri, a 38-year-old female during an in-depth interview in Kianjiru Location illustrated as follows:

Muguka means money, we cultivate it for sale because it cannot be cooked for people to eat. If you go to the market and it is not bought, you can't bring it home to cook, it is useless, you throw it away. But once sold it earns us good money with which we meet all our household needs (Njeri, 10, May, 2023).

On their part, those who were formally employed fortified *muguka* as money since it added on to their monthly income and they further described it as 'an income booster' and 'a side hustle.' Kiura, a 41-year-old male and a primary school teacher during an in-depth interview in Kianjiru Location remarked the following:

Muguka means money; it is 'an income booster' which adds on to my monthly salary. It is 'a side hustle' just like the way an employed person will run a business such as a salon to earn extra income. You know that when one is formally employed; the pay slip is already committed to paying loans and there are so many other deductions. Thus, muguka income really boosts my household financially (Kiura, 29, June, 2023).

Further, it was perceived as money since most small scale businesses - selling edibles and non-edibles – were sustained by its turnover. Gacugu, a 49-year-old female during an in-depth interview in Mbeti South Location asserted as follows:

Muguka means money, because I run a small hotel at Kiamuringa center and my customers are muguka sellers and buyers. They sell muguka and earn money, then use that money to buy hot and cold drinks and also food in my hotel (Gacugu, 20, May, 2023).

Sufficing from the above observations, *muguka* was not useful to a household in its natural state – twigs - but only after it was sold and earned money. Poulton *et al.*, (2001) observes that crops that are cultivated entirely for the market are known as cash crops. Thus, *muguka* cultivated in Mbeere South sub-County fits in this definition of a cash crop. In addition, since *muguka* was not food and could not be cooked for the household members but was purely for sale; it fitted in the category of a non-food cash crop. This corroborates (Dessie, 2015) who also observe that khat is a non-food cash crop like cotton, tobacco, tea, coffee and cacao but that is worth cultivating for its benefits to farmers' livelihood. Consequently, in the course of the in-depth interviews, key informant interviews and even the Focus Group Discussions, it emerged that as a crop, *muguka* was less vulnerable to drought and compared to food crops has less cost for labour demand throughout its production (Girma & Challa, 2002) thus giving higher returns. This observation was in line with that of Mugendi (2017) who also found out that, *muguka* earned more money than the production of the main food crops cultivated in the area. The higher returns thus explain why many small holders embraced its production. However, even though, *muguka* just like *miraa* was an outstanding cash crop (Carrier, 2005a; Carrier, 2005b; Klein and Oni 2009) the respondents revealed that *muguka* was never exported but was sold within the Kenyan borders.

4.3 *Muguka* means Help (*Útethio*)

In addition, other respondents perceived *muguka* as help locally known as *útethio*. To start with, it was described as *útethio* which suppressed hunger and famines locally known as *mbúta* and *yúra* respectively. Due to the hot and dry weather condition that characterize Mbeere South Sub-County (Kithama *et al.*, 2013) and the unreliable rainfall (MoALF, 2016) the research participants observed that crop failure is frequently witnessed in the area. Crops failure coupled with limited job opportunities to earn cash with which to buy food resulted to the residents frequently experiencing hunger and famines. In the recent past, *mbúta* and *yúra* caused the Mbeere women to temporarily out-migrate to Embu and Central Kenya locally known as *Gíkúú* to work for food locally known as *kúthúgúra*. However, it emerged that when people started cultivating *muguka*, it provided them with income with which they bought food and also provided the members of the community with chances for *ibarúa* (work) in the *muguka* farms. Thus, even when a household did not have food, they did not have to go far to work for food or to work to earn money with which to buy food like it used to happen in the past. To illustrate the above observation, Mbogo, a 69-year-old male, during an in-depth interview in Mbita Location asserted as follows:

Muguka means help; it is all we look up to since we do not have any other crop that gives as much income as it does. Muguka brought yúra and kúthúgúra to an end. Our mothers used to go to kúthúgúra in Embu and Gíkúú but not anymore. Here in Mbeere, we used to live in abject poverty and experienced famines due to drought year in year out. Muguka has really helped us. Even if one does not have food, you do not go far; you work in your neighbour's farm or within the locality (Mbogo, 30, June, 2023).

His observation corroborated with that of Njuthe, a 71-year-old female who during an in-depth interview in Mbeti South Location narrated as follows:

Muguka means help, great help. If it were not for it, I don't know where we would be. We would still be experiencing hunger and famines and women would still be temporary out-migrating to other areas in search of food. You know it is the women who used to go to kúthúgúra and not men. This is because, when the children are hungry, they don't go crying to the father, they go to their mother thus women went looking for food. In the present time if we did not have muguka, by now we would have gone several times since the last four seasons we did not harvest because of in-adequate rainfall. At least this season we will get

something from the farms as you can see. Muguka, is the one that helped end the famines and the temporary out-migrating of women to other areas in search of food in Embu and Central Kenya. How can you go hungry when you have muguka in your farm? It is not possible unless you are lazy. Even if you haven't planted, you can still work in your neighbours farm and earn money. Additionally, when you sell muguka, you use the proceeds to buy chicken, goats or even sheep. When there is no money or food, you sell them and then buy food. Hunger and famines came to an end and the temporary out-migration of women to other areas in search of food doesn't happen anymore (Njuthé, 16, May, 2023).

It was apparent that the local perception of *muguka* as the help that brought to an end the temporary out-migration by women to Embu and Central Kenya in search of food could not be disputed since the narratives provided by both males and females in in-depth interviews (irrespective of their perception towards *muguka*), key informant interviews and focus group discussions articulated the fact very clearly. Almost all the respondents who participated in this study, were aware of the temporary out-migration by women to Embu, Central Kenya and other places to work for food, which was very rampant in the recent past. The practice was widespread such that even the immigrants confirmed that indeed the Mbeere women used to go to *kúthúgúra*. For instance, Gicobi, a 69-year-old male who migrated from Embu and was permanently settled in Mbeti South Location, confirmed during the in-depth interview that the Mbeere women indeed out-migrated to Embu in search of food by indicating as follows:

*When we were young, we used to see the Mbeere women come in Embu from time to time to work for food in our homes. In addition, there were those who came with baskets and ropes in exchange for food. When they had enough they left. This used to happen but along the way it stopped. From when I settled here, I wonder whether these people are the same ones who used to come to Embu in search of food. This is because there is plenty of food. People use muguka money for food, invest proceeds in food crop production and in other businesses that rely on its turnover. Today, It's like *kúthúgúra* has been reversed; the Embu people are now in Mbeere eking a living, something that was unheard of in the past; they have bought lands, settled, cultivate muguka and run different types of businesses that rely on muguka turnover (Gicobi, 16, May, 2023).*

In addition, *muguka* was described as *útethio* which enabled the people escape extreme poverty that previously was a feature of many local households in the drylands of Mbeere South Sub-County. The respondents across the Locations observed that in the recent past: most houses were mud walled and grass thatched; a majority of the residents were primary school dropouts from public schools; people wore parched clothes and a majority did not have a change of clothes; people were dirty since they could not afford soap and there were frequent hunger and famines; all these indicating the presence of extreme poverty. According to the key informants and from the FGDs, the extreme poverty was attributed to the limited income earning opportunities for both men and women that existed previously and which paid little. The opportunities available for the men were in quarrying, sand harvesting, and manual work in the few construction sites and in peoples' farms, charcoal burning, livestock keeping and food crop production. Further, due to the few income earning opportunities, it was observed that a majority of men would out-migrate to work in the urban areas whereby a majority of them worked in the informal sector. Other men migrated to other rural areas especially in Central Kenya to work as farm hands in the dairy, coffee and tea sector among others. Women on the other hand, engaged in subsistence farming, extracting fiber from sisal, weaving baskets and ropes, selling water and firewood, and engaging in manual jobs in peoples' farms. All these opportunities earned little income leaving no surplus to engage in developments leading to the endless cycle of poverty. However, *muguka* production came in handy as perhaps the best livelihood option to alleviate poverty at the local level. Thus, the description of *muguka* as *útethio úría wanyibirie thína na úthíní* (the help that reduced problems and poverty) and as *kínyibia kía úthíní* (poverty suppressor). Consequently, both men and women were proud to note that *muguka* income had enabled them invest in: better shelters (iron sheet roofed stone, brick or plastered houses, some cemented and others tiled); educating their children to tertiary level; lands, farms and plots; building residential and commercial buildings; better nutrition; businesses; gas cookers to prepare light meals and dress well among others. All this demonstrate that poverty to a large extent had reduced in households that cultivated *muguka*. The foregoing observation was vividly captured by Muciri, a 49-year-old male during an in-depth interview in Kianjiru Location in the following chronicle:

Muguka is my source of help, it has helped me in a great way. Muguka ended the poverty that I would be languishing in at the moment. In the times we did not have it, those who dropped out of school after standard eight like I did, used to engage in hard labour such as quarrying, working in construction sites, sand harvesting and loading lorries, working in the farms and grazing animals among other difficult jobs. Such jobs brought in low returns comparative to muguka production and some were seasonal, making us barely meet our subsistence needs. My status today isn't what it should be had I not ventured in its production, I would be so poor, I would not be owning anything, maybe I would be working in construction sites, quarry, working in people's farms or I would even be in Gikúú grazing. As you can see, with muguka I cannot be considered poor. With all the things that you can see here, do you think I am poor? No. All I

have here is from muguka: that car, this stone house, those grade cows and another farm where I exclusively grow muguka which I used its proceeds to buy. As you can see, we use biogas as cooking fuel. At the moment unless you are told, you cannot differentiate households with people in formal employment and those who cultivate muguka (Muciri, 10, May, 2023).

While supporting the above observation, Micere, a 55-year-old female narrated the following during an in-depth interview in Mbita Location:

Muguka is the help that reduced problems associated with poverty. The Mbeere we see now is a complete contrast of the old Mbeere that was characterized by extreme poverty. Those women whose husbands were unemployed eked a living through working as farm hands, selling firewood, fetching water in other households, extracting sisal fiber for sale, weaving baskets and ropes and other jobs that earned them little money. There was so much poverty, people used to walk around with patched clothes and it was easy to tell, household without members in employment, some used to have only one cloth. Even eating fried food was rare. Muguka is the help that took Mbeere out of extreme poverty and it partly equalized the members of the society. We fry food just like them and we do not eat chapatti once a year. Our household goods such as cups, plates, spoons, hot pots, flasks and cooking pans among others are as good as those used by the formally employed. At the moment, we can afford to use gas. At the moment, many people do not use firewood throughout, we live like people in town, we have electricity, water, brick and stone houses which are iron-roofed as opposed to the previous mud walled and grass thatched ones. All these things have been made possible by muguka (Micere, 25, May, 2023).

Consequently, *muguka* was also described as *úthio* for the widows. Its income was the one that helped with the payment of their bills and met all their basic needs since their husbands were deceased. It enabled them escape extreme poverty, hunger and famines. To illustrate the observation, Nduku, a 61-year-old widow stated as follows during an in-depth interview in Mbeti South Location:

Muguka is a great help to me, I don't know what I would be doing since I don't have someone to share the household burden with since my husband is deceased. It helps me to meet the household needs as a husband would. It enabled me to pay school fees for my children, I was able to build my house and that of my son as you can see (nicely done plastered houses) and I am able to pay my bills. Muguka proceeds does everything for me, we never go hungry. It has really helped us (Nduku, 16, May, 2023).

Muguka's construction as help for the widows was also supported by the Assistant Chief of Nyangwa sub-Location who during a key informant interview stated the following:

Muguka has helped so many women in the area including widows. I am a widow myself and I also grow it. It has helped widows to become independent and to stop begging for help. It took the place of their husbands since it is now the provider for those who are not formally or informally employed. Widows have been able to educate their children up to tertiary level, they are able to pay household bills, they are able to build decent houses and they are able to eat well. Muguka has facilitated all this. They do not suffer as much as they would if there was no muguka (Assistant Chief Nyangwa, 05, July, 2023).

From the key informants' interviews, the FGDs and even the in-depth interviews, respondents observed that initially *muguka* was cultivated by the poor – those who dropped out of school and did not have a means of livelihood and that was why a majority perceived it as what helped them escape poverty. The foregoing observations, portray *muguka* in line with Woldu *et al.*, (2015) assertions that khat was a poor man's crop which was considered a life saver since its harvests were very frequent thus if one had a problem; it would be solved very fast. However, as time went by, even the formally employed ventured in its production when they saw the amounts of income it was earning those who were involved in its production. Additionally, from the discussions, it emerged that Mbeere did not have any other cash crop and people observed that it was God who had remembered them by bringing *muguka* to help them. This also corroborates Woldu *et al.* (2015) finding that khat was a God blessed commodity given to locals to help themselves.

4.4 *Muguka* means Employer (*Mwandikani*)

In the study area, *muguka* was also regarded as *mwandikani* (employer). This corroborates Girma and Challa (2021) who also indicate that khat serves as an employment opportunity. As an employer, it was on one hand described as a *múthungú* (white man), in reference to the colonial employer or simply a boss. The term *múthungú* was in reference to British colonialists who formally introduced white collar employment and therefore implied a boss who provided a livelihood. Hence, *múthungú* (white man) was a metaphor commonly used in the study area to mean and imply an employer or a boss. On the other hand, as an employer, *muguka* was also described as *Nairobi* (the capital city of Kenya). *Muguka* as *Nairobi* was used figuratively to indicate a place of plenty job opportunities and where white collar jobs were not a problem. This is the perception among rural inhabitants that Nairobi provides limitless opportunities and hence rural-urban migration in pursuit of such jobs. Thus, *muguka* was likened to Nairobi since it absorbed a large number of people who earned money from its production and related activities in its supply chain. As an employer, it

employed first of all the farmers who engaged directly in its production in their farms. This was because they earned income from its sales. This was in line with Dessie (2013) study among the learned Ethiopians which asserts that khat is an employer because of the large numbers of farmers it employs. To illustrate this observation Mumbi, a 43-year-old female during an in-depth interview in Mbita Location opined as follows:

Muguka is our employer. I and my husband aren't employed anywhere; it is the one that gives us an opportunity to earn income. We have been able to pay children school fees ranging from Kshs 60,000 to Kshs 80,000 per year in different secondary schools and we are not in formal employment. Where would we be getting such kind of money if it were not for muguka? We would really be suffering to raise school fees. Thus, I liken it to a white man who employs (Mumbi, 27, May, 2023).

Her observation was in line with that of Gakunju, a 43-year-old male farmer who also captured the perception during an in-depth interview in Kianjiru Location when he stated the following:

Muguka is what I have made my Nairobi, it is the office where I work. It is my office since I am not employed and I do not work elsewhere. The way the employed go to work every day, so do I here in this farm. As you can see, I am here working (he was in the farm pruning while three workmen whom he paid monthly were digging itegú - digging a big hole at the stem ready for mulching and watering. This Nairobi that I am talking about gives me enough money. With the money I have bought a piece of land where I farm food crops using irrigation, I am building that residential house (a storied stone house), I have bought that Toyota Probox, I pay school fees for my children and I meet all our household needs including food (Gakunju, 12, May, 2023).

As an employer, *muguka* had provided employment opportunities to farmers who were college and university graduates who were yet to secure alternative employment. This observation was reinforced by a narration by Ngeranwa, a 30-year-old male during an in-depth interview in Kianjiru Location, who according to his own account had a Diploma in Community Development from a tertiary institution. He narrated as follows:

I view muguka as my employer, as I wait to secure alternative employment. I have a Diploma in Community Development and I have not been successful in getting a job for years. Thus, as I wait, muguka offered me employment and I accepted the terms and conditions. I have to be in my farm always so that my employer will not be displeased and fail to pay me. My employer pays me whenever I work and does so according to my effort. As I wait to formally secure employment in my field, muguka income has enabled me build and provide for my wife and children. With its income, we have been able to achieve a lot and life is good (Ngeranwa, 13, May, 2023).

In addition, as an employer, it had availed employment opportunities to all the people –locals and labour migrants - who participated in its production activities for income such as digging, watering, mulching, manure application, pruning, spraying and picking among others, the brokers, the drivers, the riders and the dealers among many other people. The foregoing observations are in line with those of Carrier and Klantschnig (2012) who indicate that khat provides employment to many people; farmers, middle men, businessmen, and transporters and those of Goldsmith (1998) who also opine that khat trade creates many jobs not only for local people living in the growing areas but also others who have migrated to the area due to its potentiality in business. Consequently, Girma and Challa (2021) also confirms that indeed, khat is an employer of the many people working directly or otherwise in the sector in its production activities including mulching, watering, weeding, pruning, spraying, picking, packaging, transporting and retailing among others. To reinforce this observation, Gitonga, a 38-year-old male, during an in-depth interview in Kianjiru Location observed the following:

For me, muguka is my employer since I don't work elsewhere, so it is my white man. Additionally, it has employed people in so many ways; first the farmers and all the people who are involved in its production activities. It has also employed the brokers, the dealers, drivers and riders among others. The brokers bargain and buy muguka at a low cost from the farmer and then increase the price as they sell to the dealers. Once the brokers sell it to the dealers, they also employ people to pack it in the Toyota Probox-the main mode of transport used in its transportation to the market (Gitonga, 11, May, 2023).

The above assertions of *muguka* as an employer were confirmed by a 50-year-old female, a village manager who during a key informant interview in Mbita Location narrated as follows:

Muguka has employed so many people in the villages. First, it has employed us the farmers, secondly, there are those who are employed as work men who are paid at the end of the month cash ranging from kshs 8000 to kshs 15000, others are given ibarúá (work) to pick (Kshs 150 to Kshs 200 per basin/per kg), water (Kshs 400 per day), spray (Kshs 400 per day), prune (Kshs 400 per day and dig (Kshs 500 per day) among other activities and they earn money at the end of the activity. People are always working in the muguka plantations; they take care of it, they sell and it earns them income. Its income is what has improved our standards of living. With its proceeds, personally, I pay school fees for my children, buy foods that we do not grow and other essentials and carry out all the developments you are seeing here

(Village manager Gikiiro, 07, June, 2023).

4.5 *Muguka* means *Mbiacara* (Business)

In addition to the perceptions already discussed, *muguka* was also perceived as *mbiacara* (business). It was perceived as business by farmers who also coupled as brokers and those who engaged in its production for profits. To illustrate the foregoing observation, Murithi, a 53-year-old male, during an in-depth interview in Mbita Location asserted as follows:

Muguka means business and in business there are usually producers, distributors, sellers and buyers who are the consumers. In my case, I am a producer since I cultivate muguka which I sell. I am also a broker, I buy muguka from the farmers at a lower price then I increase the price as I sell to the dealers and that is how I make my profits. A short while ago, I already sold to those who sell in Nairobi and I already made my profits. Thus, muguka means business to me as I plant it for sale and I also act as a muguka broker (Murithi, 24, May, 2023).

While, illustrating *muguka* as business since it made good profits, Mukundi, a 50-year-old male, during an in-depth interview in Mbita Location asserted as follows:

Muguka means business, it is the business that I have engaged in since retrenchment from formal employment. In business, people are out to make profits. When I first returned home, I ventured in food crop production and because of unreliable rainfall, I would use a lot of inputs and harvest little and sometimes nothing at all. When I realized that muguka was earning farmers' better returns, I decided to venture in its production. Though it uses a lot of inputs in its production, it makes profits. It is a profit making venture. Once I get my profits, I use them to pay bills, such as water, electricity, and also meet the health, education and food needs of my family (Mukundi, 27, May, 2023).

The foregoing was reinforced by Ibangara, a 54-year-old male who indicated the following in an in-depth interview in Mbeti South Location:

Muguka is business, it is the business that I do. It is what I cultivate and sell. I am a class five drop out, thus, I could not get meaningful job. Thus, I used to cultivate food crops and I realized I was making losses. In Mbeere, food crops don't do well because of erratic and therefore unreliable rainfall. So I entirely stopped food crop farming and I ventured in muguka farming. Muguka gives me better returns than the food crops and with those returns I have been able to accomplish a lot. I have built better houses for my two families-for your information I have two wives, who I have also initiated businesses for, a salon and a shop. I have commercial houses that earn my family returns, two cars, and these I have done in a span of about 15 years. All these are done from muguka proceeds which I save and then borrow a loan from our SACCO (Ibangara, 20, May, 2023).

Further, the key informants affirmed that indeed *muguka* means business because during its transactions, other businesses that relied on its turnover also thrived. To affirm the above observation, a 47-year-old female, a village manager from Mbeti South Location during the key informant interview observed as follows:

Muguka means business because in business we have sellers and buyers. There are farmers selling and brokers and dealers buying. That is how people earn their profits. It is also perceived as business because it has enabled people to thrive in other kind of businesses that rely on its turnover. For instance, in Mururu, one of the khat selling center, there are general shops, butcheries, grocery stores, stores selling clothes and household goods among others. These businesses thrive because when the farmers sell khat, they use the money to buy the items for their households. People who would otherwise be idle are in various businesses that earn them money (Village Manager Gachoka, 07, June, 2023).

The Assistant Chief in charge of Mbita sub-Location during a key informant interview also confirmed that *muguka* means business by observing the following:

Muguka means business. We have a lot of people making profits from it as sellers and brokers and so on. It is also business because, it has caused other businesses to thrive. In this area and especially in the muguka selling centers, there are so many locals and immigrants from different places who have invested in businesses that rely on its turnover such as hardware, bars, butcheries, grocery and general shops among others (Assistant Chief Mbita, 05, July, 2023)

The foregoing observations were also corroborated by the married women who participated in the Focus Group Discussion in Mbita Location. In her account, which was confirmed by fellow participants, a 47-year-old farmer observed as follows

While people are selling and buying muguka in the centers other people engage in other businesses that rely on its turnover. Some sell boiled eggs, coffee, tea, ndazi, chapatti, milk and gruel among others. Since the muguka sellers and buyers leave their houses very early in the morning, they buy the edibles which serve as food before they go back home to take breakfast (FGD participant, 03, July, 2023).

4.6 *Muguka* is our Coffee or Tea (*Kaúwa kana Manjani*)

Consequently, *muguka* was perceived as coffee or tea, crops that were cultivated by the people of Embu and Central Kenya. A majority of those who held this perception were of the opinion that coffee and tea earned the farmers' income in the areas where they were cultivated; and *muguka* just like the former two crops, earned income to the people of Mbeere hence the similarity. To illustrate the foregoing observation, Mutuanene, a 58-year-old male asserted as follows during an in-depth interview in Kianjiru Location:

Muguka is like my coffee or tea. Here in Mbeere we do not have cash crops like other communities who have coffee and tea and so we cultivate muguka just like the way they cultivate their coffee or tea. If you go to Manyatta and Kanja (highland parts of Embu County) you will find people busy in their tea farms, our muguka is the equivalent here. But the problem with tea unlike muguka is that with tea you must sell through a co-operative society and the returns come many months after you deliver the produce. With muguka, returns are immediate upon delivery to a buyer (Mutuanene, 11, May, 2023).

Mutuanene's observation was corroborated by that of Kibuti, a 48-year-old male who during an in-depth interview in Kianjiru Location indicated as follows:

According to me, muguka is like coffee and tea which are cultivated in parts of Kirinyaga County. Just cross over to Piai, Mururi and Kutus (areas in Kirinyaga County where coffee is grown) and you find the people tending their coffee trees. I remember how busy the people of Kiangai (in Mathira Constituency in Nyeri County) were in their tea estates when I briefly worked there...they earned their living through tea, just like we do here with muguka ...you know the climate is different and we have to engage in the production of the crop that suits local climate, that is muguka. But I like our muguka production because income is instant like the way you switch on electricity and you see light instantly, you earn instantly upon delivery (Kibuti, 12, May, 2023).

In addition, the immigrants from other areas including the highland parts of Kirinyaga County and Nyeri County, who had permanently settled in the study area – all in Mbeti South Location where land was available for sale - and who engaged in *muguka* production also perceived *muguka* as coffee or tea. Wang'ombe, a 55-year-old male immigrant from Kimunye in Kirinyaga County captured it in the following storyline during an in-depth interview in Mbeti South Location:

To me, I view muguka as tea. This is because, we moved from Kimunye in Kirinyaga County, and tea is the major cash crop. But due to scarcity of land, I had to permanently migrate and settle here in Gachuriri (Mbeti South Location). When I came here with my wife and children, I didn't know what to do with the dryland. But in a short while, we learned the tricks from the locals especially those who were growing muguka...we came here and found that Mbeere does not have any other crop whose returns were equivalent to the crop. Thus, we followed suit without looking back and so far we have no regrets whatsoever. It is the local 'tea' that is supporting families just like the real tea does in Kimunye. Muguka is good, since you are paid money once you sell, you don't have to wait (Wang'ombe, 16, May, 2023).

Wang'ombe's observation was in line with that of Wanjaú, a 40-year-old male, immigrant from Kiaragana (Coffee and tea growing area of Nyeri County) who had the following narration during an in-depth interview in Mbeti South Location:

I perceive muguka as coffee or tea, I planted it to earn money. Where we came from in Kiaragana before we settled here, coffee and tea are the cash crops; in Mbeere the rains are inadequate and engaging in coffee or tea production is not possible. Just like the way coffee and tea is grown in Runyenjes and elsewhere in the country, here we grow muguka as a livelihood. Thus, we view it as a cash crop from which we earn a living just like coffee and tea elsewhere. The good thing with muguka is you sell and go back home with your cash unlike coffee and tea (Wanjau, 16, May, 2023).

Though from the literature, the World Health Organisation classified khat as a drug of abuse that can produce psychological dependence (Hendricks & Radwa, 2018), in this study, there was no respondent who directly perceived it as a drug. All the respondents perceived it favourably due to the economic returns. However, as the interviews proceeded some respondents who did not chew observed that chewing in excess had negative health effects such as impotence which they shyly indicated that they were not confirmed. During the FGDs and key informant interviews it was observed that maybe chewing *muguka* in excess affected the reproductive health since in the recent past only men who were past the reproductive age chewed *muguka* and speculations were widespread that some young men who chewed *muguka* constantly took long before getting married because of erection problems. To a large extent, the respondents defended the negative health effects observing that they were not present in the lives of those who chewed *muguka* without mixing with other substances and who chewed it while performing manual jobs. They observed that *muguka* chewers did not chew it alone, they mixed it with other substances widely known as promoters and these were what increased other health problems. For instance, they chewed it alongside sweets, groundnuts, chewing gums and sodas among others. Since, they chewed for long hours and some never brushed their teeth, it exposed them to tooth

decays, thus the black teeth observed among the chewers. Additionally, other *muguka* chewers smoked bhang, used alcohol and other hard substances thus according to the respondents it was difficult to single out the negative health effects purely associated with *muguka* chewing.

From the in-depth interviews and the FGDs people did not perceive *muguka* negatively but were full of praises for it. This was because, it earned them income that was used to pay household bills such as water, electricity and health insurance (NHIF- in the present time SHIF) and also meet other household expenses such as those of schooling and food. Using *muguka* income to buy food improved food security in the households. Further, the incomes were invested in the production of food crops improving crop yields and was also invested in assets such as water tanks, farms, plots - where commercial and residential buildings were built and livestock among others and these helped the households to cope in times of crisis. Though, *muguka* enabled people educate their children to tertiary level, it also contributed to school drop outs in the area whereby school going children lost interest in education and dropped out to venture in its production due to the quick money earned. In addition, when some men sold, they misappropriated the proceeds through excessive drinking of alcohol and others through prostitution. This led to conflicts and at times marriage break ups since other members of the household were disadvantaged yet they had participated in the production activities. Prostitution put the men together with their wives at risk of contracting HIV/AIDS and other Sexually Transmitted Diseases. *Muguka* farming was also associated with early marriages and increase in the number of young widows – wives of the drivers and passengers who die during accidents due to over speeding while transporting *muguka* to different destinations within the country. However, the respondents observed that the advantages superseded the disadvantages thus the persistent cultivation.

This study established that both the uneducated, educated (highest education attained by respondents was a postgraduate degree), the poor and the wealthy embraced *muguka* farming. This contradicts the findings in Madagascar whereby those with relatively high level of western education and the wealthy disdained khat (Gezon, 2012). However, in Mbeere, the educated and the wealthy appreciated its cultivation but disapproved the chewing it themselves and by the residents which raised a moral question since once sold, it earns the farmers' money but it was sold to others to chew. Additionally, even though some farmers cultivated it for sale and also chewed it, they did not perceive it directly as a stimulant however they noted that when they chewed they remained alert and worked for long hours without getting fatigued. Further, as pointed out in literature, *miraa*, the variant cultivated in Meru is of great cultural importance since it was used during circumcision and marriage rites. On the contrary, this study established that *muguka* had no place in the Mbeere social and cultural practices, it was purely for earning income. Contrary to Woldu *et al.*, (2015) who observe that khat in Eastern Ethiopia had an accepted social value in performing religious rites; this study found out that *muguka* in its natural form had no place in religious circles and the only way it was of benefit was when it was sold and then the income was taken to church as tithes and offerings. Consequently, the immigrants observed that cultivating *muguka* gave them identity as Ambeere, they indicated that, 'you cannot be said to be a Mumbeere if you do not cultivate *muguka*.' This thus explains why the immigrants embraced its cultivation.

V CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This study concluded that *muguka* was generally perceived as *mbia* (money), *úthio* (help), *mwandíkani* (employer), *mbiacara* (business) and *kaiúwa kana manjani* (coffee or tea). The above social constructions demonstrate that, *muguka* was perceived favourably by the farmers due to its economic benefits which they enjoyed as individuals, households and the community at large. This was because, many people did not chew it, it was not food thus could not be cooked and it only brought value when sold and when one engaged in its production activities and was paid or engaged in businesses that relied on its turnover. This was also attributed to the fact that *muguka* in its original form – leaves/twigs - did not have any place in the Mbeere traditions, cultural and even religious practices. Consequently, even those who chewed the twigs, perceived it in terms of economic benefits even though they observed that when they chewed, they worked without getting fatigued. Perceiving it favourably caused many small holders to embrace its production and this offered so many people opportunities to earn income which had positive implications for their households. These included, using its income to educate their children, buy food which they did not grow or when what was harvested was depleted, invest in food crop production, invest in assets such as household assets, farms, plots, residential and commercial buildings and paying household bills among others. On the other hand, its cultivation was blamed on other social evils such as school drop outs, early marriages, young men's deaths, impotence, negative health effects, alcoholism and prostitution among others. However, the respondents observed that the merits super seeded the demerits.

5.2 Recommendations

This study recommends that the people of Mbeere South sub-County be provided with water for irrigation since the rainfall was not reliable for effective farming. Though, they regarded *muguka* very highly, it also emerged that to a large extent, they embraced its farming for lack of an alternative, and since it had contributed to reducing extreme poverty in the area and improving livelihoods, they continued with the cultivation so as not to slip back. Thus, across the Locations, the respondents indicated that when provided with water, they would diversify to cultivation of other crops that earned cash and which also served as food and the ones that were not surrounded by moral controversy like *muguka*. In addition, the study recommends that the community members encourage the school going children to complete their education first before venturing in *muguka* cultivation. This was because, in case of any uncertainties regarding its cultivation in the future, educational skills will help them secure their livelihood. Further, the study recommends that the members of the community be trained on financial literacy so as to continue with the saving culture and so that those who misuse the proceeds can cultivate a culture of spending wisely. Additionally, banning the cultivation of *muguka* and leaving the farmers without alternatives of income earning opportunities will cause the community to slide back to absolute poverty and to the severe food in-security that caused women to temporarily out-migrate to Embu and Central Kenya in search of food. Consequently, the study recommends a study to investigate the non-*muguka* growers' perceptions towards it as a crop.

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