An assessment of the factors influencing commercialization of green maize in Nandi South-Sub-County, Kenya

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Abstract: Maize cereals have become a dominant food crop for both human and domestic animals in most parts of the globe especially Sub-Saharan Africa. This study endeavors to assess the factors which influence the farmers of this product to sell the green maize in Kenya. The study will be guided by two objectives; what are the available government policies on food security (maize) and what are the motivating factors for commercialization of green maize. The geographical scope of the study is Nandi South Sub-county, Kenya while the time scope 2016-2017. The study adopted a qualitative approach by critically analyzing the available literature to reach a logical conclusion. The study found that; the government of Kenya has policies- Credit facility policy, Price reduction policy, which are but in paper where its implementation does not see the light of the day. The farmers are motivated to sell green maize by the following factors: Higher returns to farmers, demand of Green Maize and Productivity. No guarantees of returns by the government on dry maize, the middle men tend to benefit and farmers plight are ignored. The study recommends that the government should guarantee farmers maximum returns. In conclusion, for a country to develop the population should be well fed hence the government should implement policies which will be able to ensure there is enough food reserve and the farmers to be ensured maximum returns on their products.

Key Words: Green maize, farmers, food, policies, government, commercialization

I. INTRODUCTION

In Kenya, the maize crop is harvested, it is dried and shelled. The maize cereals attained are put to different uses, such as posho flour for making ugali. Currently, green maize is becoming popular with the urbanite populations who use the maize to make githeri local meal of mixed beans and maize. In many households in Kenya, dried maize cobs serve as alternative source of energy used for cooking. The maize stoppers are used to make silage for the dairy sector. McCann (2000) pointed out that, by 1920s, maize cereals had become a dominant cereal crop to both African & European farmers in Kenya.

In the recent past, there has been an increase in the harvesting of green maize for sale. Many farmers sold their crop to traders who transport them in large quantities to various towns of Kenya. Others sold green maize to silage makers. These practices may have an effect on the availability of dried corn for ugali and hence may impact on food security of the Nation.

Ngethe and Owino, (1990: 34) asserts that, “Policies on food security and self-sufficiency spans all the major policies of increasing agricultural productivity, such as marketing and pricing, research and extension, infrastructure, credit and major input policies”. Evidence suggests that the commercialization of green maize affects food security and exacerbates household poverty.

This study therefore sought to establish the factors that make farmers to commercialize green maize in Kenya and in Nandi South in particular.

Scope

The study was carried out in Kobujoi, Kibwareng, Kaptumo and Kaboi locations of Nandi South Sub-county in Nandi County. The area of study has a population of about 33,000, as per the 2009 census (KNBS, 2010). The District has a high altitude and is characterized by favorable rainfall and temperature which are suitable for crop farming and Livestock keeping. Nandi County lays 3 degrees longitude and 37.5 Latitude. The county covers an approximate 3525km2 with different topographical features. The Equator line passes at the extreme south of the county. To the west is the famous Nandi Escarpment. The central part of the county is the Kingwal swamp known for the rare species of Statunga animals. Commercialization of the green Maize has been a thriving economic activity in the district. Maize covers an area of about 1273.2sqkm. Another 1000sqkm is under Tea, Maize, Beans, Vegetables and grassland.

II. METHODOLOGY

This study adopted a qualitative approach by analyzing available literature on the subject matter.

2.1 Policies Guiding Commercialization of Green Maize

Like many developing countries in Africa, failed government agricultural policies are held responsible for food problems. The then Minister of Agriculture in Kenya, Mr. William Ruto, proposed maize duty waiver, to remain in place until June 2009. However his proposal was implemented much later in 2011. This was to help build the country’s food Strategy Grain Reserve (S.G.R). Mr. Ruto observed that the farmers’ plight...
resulted from unfavorable and unpredictable weather condition. He gave directives that the deficit be imported by the government. However, this was not the case due to the many challenges the government faced. It is alleged that the Government has good policies, but lacked the executing power because of personal interest of political elites (Apiyo et al., 2006).

The government of Kenya has had a long term national planning strategy which has always remained unimplemented. The strategy was designed by the Kenya African National Union (KANU) Government and in 2003 was handed over to the National Alliance Rainbow Coalition (NARC) government. Its objective was to be realized by 2018. This long term plan strategy later Vision 2030. Its objective was to make Kenya an industrialized state (www.vision2030.go.ke). A state, where basic needs like health and food security would be availed to all its citizens. The vision 2030 is based on three “pillars” (APRM report, 2007: NRB. 1); the economic, the social and political factors. In order to achieve this meaningful development, the state is expected to put emphasis on the very basic ideals of it becoming self-sufficient in food production; which will pave way to social-economic development. The other major challenge towards the realization of a good and working national food security policy which is a production of green maize are vices like corruption, unfair distribution of government resources and also social and political challenges, Omosa (2007).

In a report from the Agriculture Policy Council, Omosa (2007) made a recommendation to the government titled, ‘Basic Direction of Agriculture Policy in the 21st Century’. This raised many queries concerning the policy of dealing with prices of farm outputs. The policy looks critically at the prices received by farmers and paid by consumers for farm outputs. As a point of focus by Mellor (1968), output policy revolves around the allocation, income distribution and investment and capital formation in agriculture. If this policy can be enhanced, farmers can get better returns of their investment in agriculture as any other business. Anderson points out a policy that subordinates agriculture to the needs of industrial growth is different from that that treats the agricultural sector as a source of employment in its own right (Anderson, 1979).

With an established policy, the government is able to plan its food security measures. With consumption rates of 40,000,000 bags of cereals per year, the surplus would earn the government enough saving, save from the destruction of maize affected by aflatoxins, imported by selfish, corrupt citizens. Putting in place efficient supply chain management by a non – profit making agency and private business investors, the Agriculture Trading and professional promotional pilot project has led to success in agribusiness in other parts of the sub Saharan countries. The same has been done throughout Kenya and more so, by facilitating through institutions like Agricultural Finance of Cooperation (AFC) to alleviate maize farmers. This is exactly what Nandi County would be doing in the near future, strengthening its monetary power so as to ease problems her farmers experience during the harvesting period (Ellis, 1997, p.69).

“The food policy will need to be sufficiently flexible to adjust to policy decisions taken from other sectors of the economy”. Kenya was confronted with food shortages and forced to import maize, wheat and milk. The Table below shows the comparison.

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<th></th>
<th>Maize</th>
<th>Wheat</th>
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<tr>
<td>Imported</td>
<td>350,000 tons</td>
<td>118,000</td>
<td>13,000</td>
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Table 1 above shows the consumption rate of maize as compared to other food products. The Table supports the need to have clear policy on maize importation; it calls for the farmer motivator so as to make the maize farming a business.

The experts are able to calculate the probable maize consumption when green maize finds its way to the market. Good food security planners in many African countries, Kenya included, tend to ignore the consequences. According to Ellis (1997), this leads to what the writer said, “Policies experts are piling pressure on the government to ban the sale and consumption of the G.M.H. as one of the ways out for the country, on food security”

2.2 Credit facility policy

The government came up with kilimo biashara policy meaning commercialization of farming as a bid to earn profit. They encouraged farmers to borrow loans from institutions with low interest rates. It was for this that the country did register a bumper harvest in the year 2012. The policy called upon the general population to adapt to new types of food, as a way of combating hunger.

According to Anderson (1995.8):

A policy is what the government ought to do or not do, depending on the demands. Policies are typically instituted to avoid some negative effect that has been noticed in the organization or to seek some positive benefit. A policy is typically described as a deliberate plan of action to guide decisions and achieve relational outcome(s).

Gay (1988.4) observes that;

Public policy is the sum of the activities of governments, whether acting directly or through agents, as it has an influence on the lives of citizens.

From the argument above, it became notable that unclear policy statements have been formulated and imposed. As a result of the food shortage of 2008- 2009, the government lowered the prices of 5kg of maize flour to ksh.140, but that was not sustainable. This made the government to further formulate policies geared towards eradicating hunger under
the policy dubbed “Njaa marufuku”. The purpose of “Njaa marufuku” in Kenya was to assist her farmers with affordable farm inputs to grow food and be able to fight poverty, which is associated with hunger (njaa). Its intended purpose was to guarantee food security, and to further ensure self-reliance of staple food supplies. As Gitu, (1992:43) highlights “Maize is the main food for 300 million people in Africa,” is in support with the statement above. With the policy in place, the unfavorable climatic conditions have not affected the farmer. However, it has given the researchers, governments, lead companies and farmers the responsibility of ensuring that maize production does not collapse.

Ngethe and Owino, (1990: 34) asserts that, “Policies on food security and self-sufficiency span all the major policies for increasing agricultural productivity, such as marketing and pricing, research and extension, infrastructure, credit and major input policies”. Some policies associated with agricultural activities on many occasions, have not been accommodative to the steady and constant supplies of dry maize by farmers to government agency, the National Cereals and Produce Board (N.C.P.B), (Standard Newspaper, 2010 October).

The worst came when the board (NCPB) chose not to buy maize but instead it offered warehouses for storage to the farmers. This did not solve the farmers’ plight, consequently risked an increase in the country’s food insecurity, creating disagreements within the government. Wahome (1994), in her deliberation, said that agricultural policies related to dairy industry which also relies on maize products should be in line with agricultural financial services.

Secondly, there is need for a strong and sound sustainable policy on credit assistance, to guide the financial institutions towards lending to support farming. However some farmers still hope for getting easy and affordable credit to enhance their prosperity. But that has remained a dream. The Government, through Equity Bank and other financial institutions has channeled its financial credit (assistance) to youth and women as a way of encouraging farming and fighting poverty, (IFM, 2011). This has become a success through the policy of “kilimo biashara” credit facility. Thirdly, successful policies on both pre and post-harvest activities should ensure an infrastructural development polices and measures ought to be clearly stated and prioritized by the government.

With ‘Kilimo Biashara’ the Ministry of Agriculture officials were involved in educating these farmers. This led to a new mode of farming. Now, with subsidized credit, farmers were able to cultivate and plant their farms. This meant that they were able to purchase the right fertilizer for the same unit, unlike the previous years. From previous studies, farmers had been known to cultivate late and only once per year. But when it came to application of fertilizer, less than 25 kilograms of fertilizer per acre was applied, (Ministry of Agriculture 2010). This led to poor crop production.

Other contributing factors which help create and stabilize market price include; animal fodder, the green maize harvesting, the dry maize harvesting, which is commonly known as “Gorgoro”; (a 2 kg tin borrowed from Luhya community from the western Kenya). Also, its mixture is used in brewing the local brews commonly known as “Busaa” a local alcoholic drink made from fermented millet flour. In addition to the stated factors, farmers are expected to adapt to the new and improved system of farming; that is cultivating twice and it need be the dry ploughing. It is expected of the farmer to plant before the start of the rain (dry planting). In order to realize good harvest, farmers were supposed to buy certified seeds and recommended fertilizers for good (Ministry of Agriculture, 2010)

Secondly, launching of the poverty eradication program and the Kilimo biashara credit facility, impacted on the general development of agriculture. The effect of global world trade shift has had enormous negative impact on the local farmers and as a result of none governmental intervention, many farmers are demoralized (Maarifa vol. 2 no 1: 2007). And for this reason, many have opted to diversify in new areas whose risk cannot be anticipated. It is unfortunate to the farmers that good arable lands, in most parts, are being converted to plant trees in expense of maize or any other food stuff.

On the same view, Mwaniki (2009) highlights the enormous investment by farmers. The farmers are anticipating an improvement in their production and recover investment borrowed from financial institution. The green maize becomes handy by offering an immediate solution towards honoring the borrowed financial obligation. Farmer’s problems are the businessman’s joy. The businessmen are after make quick profits whereas the farmers’ intention is to service their loans and meet their other obligations.

Recently, in the Kenyan media, the minister of Special Programmes said that the imported maize infected with aflatoxin be used for animal feed. This shows the level of consideration between imported and local crops. They can still afford to risk human life, yet it is known that has happened in many parts of Africa and Asia where maize has become a dominant crop for agricultural economy for many countries.

Mwiniki’s report shows that every successful farming activity, be it cereals or any other, are determined by good markets. As a matter of principle, most developed countries have taken good care of their farmers unlike the developing countries. 

2.3 Price reduction policy
Some of the food policies instituted in Kenya have played a significant role in promoting better food production. Farmers were supplied with one bag of fertilizer and a 10 kg of Hybrid seed). This, according to literature, has discouraged the commercialization of their farming activities. The year 2010 was a good year for those living in urban areas more so in slums; the Government lowered maize flour to ksh.52 for two kilograms. An extract from the World Bank said, “As governments have reduced their intervention in agricultural
markets, there has been a corresponding reduction in the share of public expenditure directed toward agriculture” (Geier, 1995). This can be fully contested with thousands of acres lying fallow (Ministry of Agriculture 2011). It has therefore compromised the country its food production and an increase in C.G.M.

Policies can be categorized into two ways, either, to give the farmer freedom to do what he or she likes best. And second is that the government to impose restrictive policies. The cost incurred in farming has shot up in recent years as in the 1980s following the global economic crises and the introduction of the S.A.P.S. (Structural Adjustment Programs). The SAPS favored the western states whose investments are more technological (Arunachalam, et al., 1995).

Reports based on some experts, policy matters have ended up being a setback to farmers, and calls for urgent review. But this is a lot easier said than done. It is difficult to reverse the changes, bearing in mind that some sectors are manned by government officials who are instrumental in the green maize business and are found to be discouraging policy formulators and implementers (Apiyo and Omolo 2006). The worst scenario was when Kenya was going through a hard time in 2011 as a result of severe drought. The country, in 2010, had seen a lot of C.G.M. taking place, Gituku, (1992).

The government has not openly acknowledged that the per capita consumption of maize is increasing every year while the production is stagnating. The country has been suffering from structural food deficit Since 1990s.” (Ministry of Agriculture, 2011). If the government in future is to push for a ban of the CGM, the first causalities will be farmers. In the wider view and advice to the state, first, is to budget for and consider the domestic food security of the farmers. By so doing, food security shall have been checked. Commercialization of green maize appears a small issue and that can get a quick solution, but slowly undermining the ability to tame food insecurity.

Several policy makers brought on board the need for the government to ban the sale and consumption of green maize as a measure and an effort of lifting the country out of food insecurity. The government side insists that farmers have the free hand to decide. This is true but there shall be a moment when the government will shoulder all the burden of hunger and poverty. But besides all policies, this seems to contradict the Article 39 of the Rome treaty where it emphasizes on the purpose of market stabilization on common agricultural policy (Neville and Mordaunt, 1993). The food analyst pointed out the planned roll-out of grain warehouse system (GWS) by the National Cereals and Produce Board (N.C.P.B.), as it presents an opportunity to formulate policy that would limit the sale of green maize. This Grain Warehouse System policy became a supporter to CGM.

However, it raises contentious issues from the proponents who argue that the enactment of such policy will be against the free market principles. “Governments were once active in production, processing, and trade, but the rise of supply chains and the application of more rigid grades and standards. Hence, it would require governments to act more as facilitators by developing and enforcing the rules (The World Bank, 2005”). To shed more light on policy understanding, it was able to, “…to evaluate the effectiveness and morality of the policies” (Guy, 1986). In the fight against hunger, the food security experts, such as Tegemeo, view CGM as a waste. The roasted/boiled maize is eaten as snacks and a consumer ends up eating the expected moment’s meal. But that is not the case for struggling Kenyans. “The sale of green maize by farmers in Nandi County is likely to compromise food security”.

Thus “farmers in the region risk hunger next year unless they stopped selling their green maize. Tens of lorry loads of green maize leave Aldai constituency daily for Eldoret, Nakuru, Nairobi and neighboring towns of Kisumu and Kakamega. This was lamentation by a woman who has been subjected to hunger by her neighbors (Ministry of Agriculture Nandi South, 2012).

Nandi county, and particularly Nandi South District, receives adequate rains sufficient for maize growing as compared to other areas where there is shortage of rain. Local farmers who make large amounts of money daily from selling green maize, are not about to stop selling green maize. Pricing policy is one of the decisions at the heart of Africa’s agricultural growth in many countries (Rukuni and Eicher, 1994).

However, on some occasion the same piece is going for as low as ksh.1500. Green maize harvesting is a threat to food security as published on 01/07/2009, (Ministry of Agriculture Nandi South, 2012). “Come September, we are likely to see yet another failed harvest in marginal areas, and low production in the Rift valley and Central province the grain basket”. The then Minister of Education, Dr. Sally Kosgei and Agriculture minister, Mr. William Ruto, were appealing to the farmers to be patient until the crops mature for harvest. With the current price, farmers are not in a position to store any cereals.

III. FACTORS MOTIVATING THE SELL GREEN MAIZE

Behavioural influences have played a major role in enhancing the growth of commercialization of green maize. Maize farming in Nandi County has varied planting times and harvesting. From the variant time, it is argued that influence depends on the time and event. Omosa (2007), stated that when maize cereals are produced abundantly, farmers are likely to adopt group behaviour. Like Omosa and Omondi (2009), called for a Kenya campaign for ban of green maize commercialization. According to him, green maize commercialization hurt the state and the farmers alike. This business impoverishes the farmer in two ways, the short and long term. Farmers’ investment can be exhausted in a very short time. For instance, farmers have been paid with fake currency notes. The collective behavior has allowed middlemen to exploit farmers. This has given corrupt individuals an opportunity to exploit the situation. Losing all
income in one harvest strains the farmer who may not be able to acquire farm inputs for the next crop.

3.1 Higher returns to farmers

The high return depends on proper farm preparation. Well-tended farms have been known to fetch up to ksh. 50,000 per unit acre. In Nandi South District, most average farms fetch between ksh 20,000 and ksh 30,000 in the same unit area, (Ministry of Agriculture-Nandi Kapsabet, 2012).

Mathenge (2004), in her study, reported that C.G.M. has eaten into the country’s basket and is claiming up to 40 to 60% of maize produced in Nandi County. This may be an indicator of quick reforms. For farmers, it is the expansion of production per unit area of green maize. The Ministry of Agriculture maintained that banning of green maize commercialization will put the government in a worse situation in its fight against poverty and unemployment. The then director’s sentiments were echoed by many farmers who said that it is upon the government to come out clearly on the market policies. If anything, it is the farmers who have taken the burden of feeding the hungry and poor. Still on the same, the Ministry of Agriculture insist that the state should ban C.G.M. as a measure of building food security, as this will boost the price value after harvest in the corn oil production.

In the literature, it was noted that ‘githeri,’ a local meal of the mixture of maize cereals and beans have become popular country wide. The basis of the argument before tabulation may seem not to be realistic but the argument itself is real. An estimated 23 million bags is consumed as C.G.M. as compared to the annual national consumption of 37 million bags (www.asleiden.nl/pdf/paper07112002.pdf). This leaves behind about 14 million bags as dry maize harvest.

Public officers and politicians do not seek to win the trust of farmers. For example, Kenya’s Finance Minister proposed the need to reduce import duty on maize, wheat, and rice. Farmers thought of this as an attempt to enrich the importers at the expense of the farmers whose maize and other cereals have not been bought by the government.

3.2 Demand of Green Maize

The Ministry of Agriculture report of 2012 pointed out that commercialization of green maize has become popular and backed by farmers’ demands. Harvesting periods is varied. In areas like Kaptumek, Kongoro, Kobujo and other neighboring areas, harvesting starts in the months of January to March. This is unlike Kaptumo, Kaboi and Mugundoi whose’s harvesting ends in April. Business delay as one move towards the eastern part of the country like Lessos and Ndubeneti areas where harvesting occurs in months of August and September. Looking at the trends of natural calendar for maize harvesting while still fresh in Nandi County comes to being as indicated by the Ministry of Agriculture Nandi County. The report from the ministry showed popularity of C.G.M. and is cutting across the country. The study therefore looks at counties like Narok, Bomet, Nakuru, Kisii, Kakamena, Bungoma, Vihiga Trans Nzoia, Elgeiyo Marakwet and Uasin Gishu where similar activities have been noted in other countries.

A report from UN-OCHA (2010) on Ethiopia’s food crisis showed that green maize is empowering the farmer, but this does not sustain the farmer as well as the state. The report indicates that, “In a time span of only three and half hours the mission observed 16 trucks filled with green maize traveling from Boditi via Shashheme to Addis in 1984.” This shows the popularity of the commercialization of green maize and how widespread this economic activity has broadened.

3.3 Profits in the Green maize business

Green maize commercialization, like any other business is profit engineered. This profit as such, is enjoyed by many players, the middlemen, businessmen, the farmers and lastly, those at the market environment (Muller, 2001, p.25). The green maize has its own success and challenges and affects the farmer in several ways including, the decrease in the amount of subsistence maize for the farmer. Despite the enormous challenges, the farmer still earns some profit. As stated above, the little and unsteady income and the land holding capacity has reduced dry maize production. That is why each year; the number of farmers selling their maize has increased by three folds. However, it highlighted the government’s involvement especially when deaths, resulting from hunger, are published in Kenyan papers.

3.4 Productivity

The standard measurement of production per acre during harvesting is varied. According to businessmen buying green maize, their measurement is based on seed dispersal. There is an allowable margin of 0.2 acre over and above the normal acre. Well sowed seeds fetch a good price. This sounds negative, but in the long run, it affects production and price of dry maize harvesting.

Kiruki (2004), argues that man is a social being and it is this perspective that entrusts compels man to provide for the whole society. By assumption, this social being has failed on the duty vested upon him by the country’s constitution. Thus, his failure as a role model in the society has created his own destiny. He said: “society hence is proper to man on account of his rationality and that is also to the state” (Kiruki, 2004: pg 228).

Upton (1996) notes that farmers’ constraints are: land, planting and weeding labor. All other problems from financial, poor seed production, cost in digging are part of the farmers’ misery whereas the government is busy with the vision 2030. However, the vision has set a road map to development. This is a reality and is the story that must be told. Food should be found on every table. The set constraints attributed to land, planting labor and weeding labor are showing how the farmers are suffering. This explains the amount of seeds planted per acre, and how farmers, being
human, may decide to congest the seeds in the field, for better harvest.

IV. RECOMMENDATIONS

This paper recommends that the government of Kenya like most Africa’s developing nations do not lack policies to ensure food sufficiency but political will to implement such policies hence the vicious circle of inadequate food supply despite favorable environmental factors.

V. CONCLUSION

Despite the many challenges and the government efforts, there is need to improve the welfare of the farmer to ensure food security. One of the responsibilities of a government is to be able to feed her people and thus need to ensure food security. Food security means securing enough food for all her citizens all year round. The existing policies are adequate but they lack strict implementation.

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