Implementation of Njaa Marufuku Kenya intervention in Kajiado County and the implications for food security

Accepted 15th May, 2013

ABSTRACT

The Government of Kenya and other key stakeholders such as the World Bank and NGOs have implemented over the years various interventions in the agriculture sector aiming to curb poverty, hunger and to enhance food security. Despite the interventions, there has been little improvement on enhancing food security and reducing poverty levels particularly in Arid and Semi-Arid Lands (ASALs). The Government through the Ministry of Agriculture came up with a home-grown approach known as Njaa Marufuku Kenya (NMK) to address food insecurity. Njaa Marufuku Kenya is a Kiswahili language term, which means to; Eradicate hunger in Kenya. Despite the implementation of NMK, the targeted beneficiaries still heavily rely on relief food from the donors and the government agencies. This raises the doubt of whether NMK has had any significant influence in enhancing food security. The study thus sought to examine the implementation of Njaa Marufuku Kenya intervention in Kajiado County, and the implications for food security. The study used a descriptive survey research design to collect and analyse data. Content validity was ensured using experts from Egerton University while a reliability of 0.829 was ascertained through pilot testing. The results showed that all the three NMK interventions, the NMK farmer training and empowerment, community agricultural development Initiatives and agricultural productivity interventions had a positive influence on food security in Kajiado County. The study recommends continuous training and empowerment of the NMK funded groups in the implementation of their respective project, more enhanced community participation, a more enhanced funding and fully utilization of the purchased technologies/inputs.

Key Words: Agricultural production, food security, Njaa Marufuku, Kenya.

INTRODUCTION

According to Poverty Baseline report, 53% of the population in Kenya lives below the poverty line and 51% are food poor (Kenya National Bureau of Statistics, 2010). This translates to poor endowments hence poor access to food. The major causes of food insecurity in Kenya are the rapidly growing demand and changes in consumption patterns, competition for agricultural land for other uses, effects of global environmental change, soil degradation, erosion of agricultural biodiversity, water scarcity, inadequate storage and post-harvest technologies, and poor marketing information (Kangethe, 2004; Armah et al., 2010).

The Government of Kenya and other key stakeholders such as the World Bank and other Nongovernmental organizations (NGOs) have implemented over the years various interventions in the agriculture sector aimed at curbing poverty, hunger and enhancing food security. Despite the interventions, there has been little gain in
enhancing food security and reducing poverty levels particularly in Arid and Semi-Arid lands (ASALs). In 2004, the Government through the Ministry of Agriculture (MOA) came up with a home-grown intervention known as Njaa Marufuku Kenya (NMK) to address food insecurity. Njaa Marufuku Kenya is a Kiswahili term which means ‘Eradicate hunger in Kenya’. The main purpose of the NMK is to spearhead the fulfillment of Millennium Development Goal Number One (MDG-1). The goal of the program is to contribute to reduction of poverty, hunger and food insecurity among poor communities in Kenya (MOA, 2006).

The NMK programme has three components. The first component is concerned with support to community-driven projects for food security improvement, and focuses on empowerment of communities through capacity building of group members and their facilitators. The second component is the support of community nutrition awareness and school meal programmes that aims at improving health and nutrition status of vulnerable people and school going children. The third component is the support and up-scaling of private sector food security innovations. This involves participation of community-based organizations (CBOs), NGOs, private sector organizations and other independent food security innovations (MOA, 2006). The dominant component in Kajiado County is the first one, which deals with the support of community-driven food security improvement projects.

The strategies used by NMK in all the three components include training and empowerment, community driven agricultural development initiatives (through community participation in project planning and implementation) and agricultural productivity through purchase and utilization of technology/farm inputs. Apart from NMK, other projects that have been implemented in Kajiado County with regard to food security include water harvesting for crops and livestock production, and traditional high value crops project, where few identified groups/institutions are provided with high yielding planting materials to bulk for the community.

Despite the implementation of the NMK Programme from 2006, food security remains a problem in many parts of Kenya, including Kajiado County. The Kajiado County community members including those of NMK funded groups still heavily rely on relief food from the donor agencies and the Government. This raises the doubt of whether NMK has made any significant contribution to food security in the County. NMK provides grants to community groups for carrying out projects that enhance food security. It is not clear why community groups funded through NMK continue to rely on food relief in the County and hence the need for this study.

The purpose of this study was to examine the implementation of Njaa Marufuku Kenya intervention in Kajiado County, in order to identify the achievements, challenges and the improvement areas of NMK in contributing towards improved food security in the County.

RESEARCH FOCUS

The concept of food security involves both physical and economic access to food to meet people’s dietary needs (FAO, 2010). Over 800 million people are chronically undernourished in a world that can produce sufficient food for everyone. Over 10 million people in Kenya suffer from chronic food insecurity and poor nutrition. In recent years, it is estimated that at any one time, about two million people require food assistance. During periods of drought, heavy rains and/or floods, the number of the needy could double (GOK, 2005). Food security is a multi-facet issue, which is caused by various factors. It is by understanding the factors undermining efforts to thwart food insecurity and their relationship that effective strategies to curb the menace can be realized. Some of the main factors that affect food security include inappropriate land use practices, inadequate institutional capacity and linkages, livestock and livestock product marketing, credit and inputs, agricultural extension and training, and disease and pest control (MOA, 2008).

Effective action against hunger and poverty has been impeded by a lack of political will to tackle the problem and, consequently, to provide the required resources. However, following the adoption of the Millennium Declaration, the formulation of the Millennium Development Goals (MDGs) and their reaffirmation at the Monterrey Summit in 2002, there are now encouraging signs of a strengthening of resolve to fight poverty and hunger (MOA, 2006). The strategies used by NMK to enhance food security include; training and empowerment, community driven agricultural development initiatives and agricultural productivity.

Through the NMK initiative, the main areas of intervention has been to focus on increasing agricultural productivity which includes enabling group members to purchase modern technology to advance in their area of production, purchase of new hybrid varieties both in animal and crop production. The various groups in the country have accrued many benefits some of which include increase in yield for either crops or animal products and increase in volume or production area under animal or crop production. In addition, the groups generate income from the sale of products they specialize in (MOA, 2006). NMK supports community driven agricultural development initiatives targeting the extremely poor and vulnerable groups in our communities. Interventions are geared towards increased agricultural productivity, food utilization, agro-processing and value-addition, health and nutrition improvement, water harvesting and conservation of the natural resource base to ensure sustainability of the current production systems (MOA, 2008).

The overall objective of the programme is to contribute to
reduction of poverty, hunger and food insecurity among poor and vulnerable communities in Kenya by 2015. The strategic objectives include to enhance community driven food security initiatives through support to resource poor and vulnerable communities; to improve the health and nutrition status of vulnerable groups (pregnant and lactating mothers, children under five and school-going children); to promote participation of private sector in innovative food security and livelihoods initiatives (MOA, 2006).

The groups are allowed to decide the sector to base their projects. The group specifically engage in either crop or animals production. Animal farming include steer fattening, dairy goats rearing, poultry farming, goat production. Those that are involved in crop production engage in activities like tissue banana farming, mango, fruits and vegetables cultivation, tree nursery and fodder conservation among others. Bee keeping is also a major economic activity engaged in by a number of the NMK funded groups (MOA, 2006). Through training and empowerment, there is continuous learning and continuous improvement, which are important management tools that increase efficiency of long-term sustainability of PPP. In this regard, NMK adopted a systems approach in which the whole PPP is seen as a system comprising various actors who all need to work efficiently to ensure the eventual efficiency of the PPP. The system inculcates continuous learning and improvement. This has made the farmers to remain up to date in the technology applications they use (MOA, 2006).

The ultimate threshold of helping the needy is in their empowerment to fully own the interventions championed by external actors like in the case of NMK. To actualize beneficiaries’ empowerment, NMK adopted four strategies: Clear definition and identification of the real target beneficiaries, capacity building through training and exposure to latest research technologies through effective research-extension-farmer-private sector liaison arrangements, devolution of resources from public offices to be managed directly by the beneficiaries and participatory M and E systems involving the members of the beneficiaries and delegated decision-making (GOK, 2005).

**RESEARCH METHODOLOGY**

The study used descriptive research design, a method that enables the researchers to summarize and organize data in an effective and meaningful way (Mugenda and Mugenda, 2008). The design was deemed suitable since it helped to describe the state of affairs as they existed, without manipulation of variables (Kothari, 2004). Stratified random sampling procedure was used to select the sample, as this technique produces estimates of overall population parameters with great precision (Kothari, 2004). The population was grouped into three strata, that is; animal production, crop farming and bee keeping. From each stratum the researcher used simple random sampling to proportionately select 24 groups, which constituted 72.7% of the total number of groups funded by NMK in Kajiado County. From each of the NMK funded groups the researchers selected and administered the questionnaire to three executive officials, thus the study had a sample size of 72 respondents. This is in conformity with the Krejcie, Robert, Morgan, and Daryle (1970) table of sample size determination.

Two primary data collection instruments were used; a questionnaire and an interview guide. These were chosen primarily due to their practicability, applicability to the research problem and the size of the population as well as their cost effectiveness (Denscombe, 2008). A self-administered questionnaire with both open and closed ended questions were developed and administered to obtain information from the 72 respondents. On the other hand, the interview guide was used to obtain data from key informants who were drawn from the relevant Government line ministries officers in the County. The statistical package for social sciences (SPSS) was used for data analysis, whereby frequencies, percentages, mean and standard deviations generated from the various data categories were computed and represented in different tables and figures.

**FINDINGS AND DISCUSSION**

**General Information on NMK groups**

The study sought to establish the information on the NMK funded groups, duration of operations, the projects area of specialization and the kind of project that the NMK funded groups engaged in. The study findings indicated that majority (71.4%) of the NMK funded groups had been operational for 1-5 years. This indicates that majority of the NMK funded groups had been operating for periods long enough to utilize the yearly grants from NMK and could therefore articulate the benefits of NMK. Majority of the key informants (50%) had worked in Kajiado County for 10 – 20 years, 40% for over 20 years while a small proportion (10%) of the respondents had worked in the county for below 10 years. This depicts that the majority of the key informants gave accurate and reliable information on the influence of NMK on food security owing to their many years of experience while working in Kajiado County.

In order to understand the NMK funded groups’ project nature, the respondents were asked to indicate the areas in agriculture that the group based their project. Figure 1 indicates an analysis of NMK funded groups’ project nature. According to the Figure 1, 52.9% of the respondents indicated that their groups projects were based on livestock production, 30% were based in crop production while 17.1% were involved in bee keeping. This reveals that...
majority of the NMK funded groups were based in livestock production implying that NMK grants had helped them to improve on livestock farming Kajiado County.

**Proportion of group members trained under NMK**

The research established that NMK funded groups are trained in crop and animal husbandry for both indigenous and improved/modern animals and crops, agribusiness and marketing of products, bee keeping, irrigation and poultry. The respondents were asked to state the proportions of group members that were trained in their respective NMK funded groups (Figure 2). Most of the respondents (42.9%) reported that 25-50% members of their respective NMK funded groups had received training, 27.1% indicated that less than 25% of the group members were trained while 15.7% of the respondent posited that 51-75% of the group members received training. The findings illustrate that the training provided to NMK funded groups was insufficient since only small proportion of the members received training regarding the projects they were involved in.

**Training and empowerment through NMK and food security**

To further assess the influence of training and empowerment on food security of NMK, the respondents were requested to indicate their level of agreement on the
Table 1. Statements on Training and Empowerment Through NMK.

<table>
<thead>
<tr>
<th>Training and empowerment through NMK</th>
<th>Mean</th>
<th>Std dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through NMK we have received training on how to reduce poverty (capacity building)</td>
<td>4.393</td>
<td>0.8751</td>
</tr>
<tr>
<td>Local residents are empowered to fully exploit the available resources</td>
<td>4.264</td>
<td>0.8812</td>
</tr>
<tr>
<td>Devolution of resources from public offices to be managed directly by the beneficiaries</td>
<td>4.122</td>
<td>0.1501</td>
</tr>
<tr>
<td>We have been empowered to fully own the projects to eradicate poverty and increase food security</td>
<td>4.129</td>
<td>0.7902</td>
</tr>
</tbody>
</table>

extent to which the various statements on training and empowerment are reflected in the implementation of NMK funded projects. The responses were rated on a five point Likert scale where: 1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; and, 5=Strongly Agree. The findings are summarized in Table 1.

From the study findings, the majority of the respondents agreed that through NMK they had received training on how to reduce poverty (capacity building) (M=4.393); local residents were empowered to fully exploit the available resources (M=4.264); they had been empowered to fully own the projects to eradicate poverty and increase food security (M=4.129) and, that there had been devolution of resources from public offices to be managed directly by the beneficiaries (M=4.122).

The findings are in support of the fact that the ultimate threshold of helping the needy is in their empowerment to fully own the interventions championed by external actors like in the case of NMK.

Involvement of group members in deciding the kind of activity to base the projects

The respondents were asked whether the group members were involved in deciding the kind of activity on which to base projects. Figure 3 illustrates the study findings. From the study findings, the majority of the respondents (62.9%) agreed that group members were involved in deciding the kind of activity to base projects.

This finding depicts that there was community participation in the implementation of NMK.

Community participation

In order to further assess the influence of community-driven agricultural development initiatives on food security, the respondents were requested to indicate their level of agreement on the extent to which the following statements on community participation are reflected at the implementation of their NMK funded projects. The statements were rated on a scale of 1 to 5, where: 1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; and, 5=Strongly Agree. The findings are summarized in Table 2.

From the findings, the majority of the respondents agreed that there were regular meetings for the group members to give their input about the project progress and improvement (M=4.269) and that the group members were involved in decision making in the running of their project (M=4.146).

The study findings imply the significance of community participation in the implementation of NMK funded projects to eradicate food insecurity. The member attending regular meetings about the project progress and improvement and being involved in decision making in the
running of the project would enhance project ownership by the group members.

Community driven agricultural development initiatives

The respondents were further asked to indicate their level of agreement on statement on community driven agricultural development initiatives. The results are as stipulated in Table 3. The study found that the majority of the respondents agreed that members are involved in decision-making in the running of the projects in the area (M=3.982). However, majority of the respondents disagreed on statements that there is creation of more efficient agricultural extension (2.473). The initiatives target to promote projects of the extremely poor and vulnerable groups in the communities, and contribute to general environmental conservation through improving soil fertility, soil and water conservation and agro forestry (M=2.066).

This depicts that community driven agricultural development initiatives influence food security in Kajiado, as NMK group members are involved in decision making in the running of the projects.

Agricultural productivity initiatives

The purchase of the technologies/inputs required for the implementation of the project

The respondents were asked to indicate whether the groups purchased the technologies/inputs required for the implementation of the project. Majority (92.86%) of the respondents reported that the NMK funded groups purchased the technologies/inputs required for the implementation of the project. Only 7.14% never purchased the technologies/inputs required for the implementation of the project. This reveals the great importance of NMK cash grants to the respective groups to enable them purchase technologies/inputs required for the implementation of their projects.

Proportion of the total funds granted used to purchase the technologies/inputs

The respondents were further asked to indicate proportion of the total funds granted that they used to purchase the technologies/inputs. Figure 4 summarizes the study findings. The majority of the respondents (57.1%) indicated that they utilized 51-75% of the funds to purchase the technologies/inputs, 20% said that they utilized less than 25% of the funds granted while 12.9% of the respondents indicated that they utilized 76-100% of the funds to purchase the technologies/inputs. The study findings therefore reveal that the NMK groups to purchase the technologies/inputs used most of the NMK cash grants.

Proportion of the purchased technologies/inputs utilized by the groups

The study sought to establish the proportion of the purchased technologies/inputs that was utilized by the groups. The findings are illustrated in Figure 5.

The study findings show that the purchased technologies/inputs were used to a moderate extent as indicated by most of the respondents (42.1%), 28.9% of the respondents posited that they utilized the purchased technologies/inputs to great extent while 21.05% of the NMK funded groups utilized the purchased technologies/inputs to a low extent. The study findings imply that the NMK funded groups are not fully utilizing the

Table 2. Level of community participation in planning and implementation of projects.

<table>
<thead>
<tr>
<th>community participation in planning and implementation of projects</th>
<th>Mean</th>
<th>Std dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The benefits are shared equitably among the members of the group</td>
<td>1.234</td>
<td>0.1245</td>
</tr>
<tr>
<td>There are regular meetings for the group members to give their input about the project progress and improvement.</td>
<td>4.269</td>
<td>0.7138</td>
</tr>
<tr>
<td>We involve the group members in decision-making in the running of the project.</td>
<td>4.146</td>
<td>0.9652</td>
</tr>
<tr>
<td>We involved the group members in the formulation of project proposals.</td>
<td>2.234</td>
<td>0.1245</td>
</tr>
</tbody>
</table>

Table 3. Community driven agricultural development initiatives.

<table>
<thead>
<tr>
<th>Community driven agricultural development Initiatives</th>
<th>Mean</th>
<th>Std dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The initiatives targets to promote projects of the extremely poor and vulnerable groups in the communities</td>
<td>2.126</td>
<td>0.3894</td>
</tr>
<tr>
<td>Creating more efficient agricultural extension</td>
<td>2.473</td>
<td>0.7245</td>
</tr>
<tr>
<td>Contributes to general environmental conservation through improving soil fertility, soil and water conservation and</td>
<td>2.066</td>
<td>0.6783</td>
</tr>
<tr>
<td>agro forestry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are involved in decision making in the running of the projects in the area</td>
<td>3.982</td>
<td>0.6924</td>
</tr>
</tbody>
</table>
purchased technologies/inputs, which hinder them from accruing the maximum benefits from adoption of the new technologies.

The findings further support the fact that through the NMK initiative, the main areas of intervention has been to focus on increasing agricultural productivity which includes enabling group members to purchase modern technology to advance in their area of production, purchase of new hybrid varieties both in animal and crop production. The various groups in the country have accrued many benefits some of which include increase in yield for either crops or animal products and increase in volume or production area under animal or crop production. In addition, the groups generate income from the sale of products they specialize in.

**Benefits related to agricultural productivity derived from NMK Programme**

The respondents were asked to indicate their level of agreement on the interventions to improve agricultural productivity and the benefits derived from NMK programme. The responses were rated on a five point Likert scale where: 1- Strongly Disagree 2 - Disagree 3 - Neutral 4- Agree and 5- Strongly Agree. The mean and standard deviations were generated from SPSS and were as illustrated in Table 4.

According to the findings, majority of the respondents agreed that groups use new breeds (hybrid breeds) (M=4.391) and purchase of new technology (M=4.093).
Table 4. Benefits that are derived from NMK Programme.

<table>
<thead>
<tr>
<th>Benefits derived from NMK Programme</th>
<th>Mean</th>
<th>Std dev</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(i) Interventions to improve agricultural productivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of new technology</td>
<td>4.093</td>
<td>0.5231</td>
</tr>
<tr>
<td>Use of new breeds (hybrid breeds)</td>
<td>4.391</td>
<td>0.5037</td>
</tr>
<tr>
<td>Value addition of the products produced</td>
<td>2.434</td>
<td>0.124</td>
</tr>
<tr>
<td><strong>(ii) Result of intervention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in yield of crops produce</td>
<td>4.232</td>
<td>0.9254</td>
</tr>
<tr>
<td>Increased area under crop production</td>
<td>3.868</td>
<td>0.3021</td>
</tr>
<tr>
<td>Income generated from crops</td>
<td>4.033</td>
<td>0.2104</td>
</tr>
<tr>
<td>Increase in yield of Livestock produce</td>
<td>4.029</td>
<td>0.8624</td>
</tr>
<tr>
<td>Increased number of livestock</td>
<td>3.061</td>
<td>0.1963</td>
</tr>
<tr>
<td>Income generated from sale of Livestock and Livestock produce</td>
<td>3.004</td>
<td>0.5354</td>
</tr>
</tbody>
</table>

However majority of the respondents disagreed that from the NMK programme, they derived value addition of the products produced (M=2.434).

On the benefits derived from NMK programme, the majority of the respondents agreed that through NMK there is increase in yield of crops produce (M=4.232), income generated from crops (M=4.033), increase in yield of Livestock produce (M=4.029) and increased area under crop production (M=3.868). However, majority of the respondents expressed moderate view on the statement that the NMK has helped the groups with increased number of livestock (M=3.061) and income generated from sale of Livestock and Livestock produce (M=3.004).

From the interview with the key informants on the kind of technologies/farm inputs purchased to improve on agricultural productivity, they highlighted that NMK funded groups purchase planting materials, pesticides, fertilizers. In addition, they purchase machinery, livestock drugs and purchase improved breeds for both milk and meat production. The key informants further indicated that NMK funded groups utilized 50-80% of the total amount granted to purchase the technologies and inputs. MOA (2006) stated that agricultural productivity interventions enable group members to purchase modern technology to advance in their area of production, purchase of new hybrid varieties both in animal and crop production corroborate the research findings.

**Challenges facing NMK intervention**

The study was able to establish major bottlenecks limiting the effectiveness of NMK intervention towards enhancing food security in Kajiado County. Respondents reported that the cash grant given to the groups by NMK was not adequate to make the projects being implemented sustainable. In addition, only a small number of NMK group members (25-50%) received training, which made the majority of the NMK group members less effective in implementing their projects. Another challenge reducing the achievement of food security through NMK was the low community participation in the implementation of NMK and thus reducing project ownership and success rate of the projects. Similarly, NMK funded groups spent the highest proportion (51-75%) of the NMK grants on purchasing of the technologies/inputs, which they utilized to a moderate extent. The lack of full utilization of the purchased technologies/inputs contributed to reduced success rate of the NMK interventions towards reduction of food insecurity in Kajiado County.

**Conclusions**

Several conclusions were drawn from the study. First, the training and empowerment of the NMK funded group members before the implementation of their respective projects had the potential to positively influence food security in Kajiado County. However, the low proportion of group members in training and empowerment reduces the effectiveness and sustainability of the projects. Secondly, community-driven agricultural development initiatives possibly had positive influence on food security in the County since there was community participation in the implementation of NMK. Thirdly, agricultural productivity interventions through NMK also had a positive influence on food security as the majority of the NMK funded groups spent the highest proportion of the NMK grants on purchasing of the technologies/inputs they needed. However, there was a gap in the utilization of the purchased technologies/inputs as the purchased technologies/inputs were utilized to a moderate extent by most of NMK funded groups. Finally, although the NMK groups funded derived benefits related to agricultural productivity from NMK Programme, the benefits accrued have not been enough sufficient to make the granted community group members...
food secure. The study therefore, recommends that the three components of NMK should be strengthened, so that their impact can be reflected more strongly in terms of improved food security for the people of Kajiado County.

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