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# Household Food Insecurity Coping Strategies in Bungoma County, Kenya

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**Abstract:** Fighting hunger in a changing world demands that we stay vigilant in the way we obtain and share information that is critical for designing and implementing hunger strategies. Lack of Food in any country in the world is of great concern. For a long time Kenya government has strived to be food sufficient but all in vain. Research reports indicate that fifteen million Kenyans are food insecure with three million in constant need of food relief. For many years, the Kenya Government has strived to achieve food security through implementation of projects and security initiatives across all counties, but Bungoma county residents are still food insecure. People in Bungoma used varying coping strategies to mitigate hunger but cases of insufficient food were many. The study was done in Bungoma County and it aimed at evaluating the effectiveness and efficiency of food insecurity coping strategies used by households. Questionnaires, interview schedules and group discussions were used to collect data. The collected data was subjected to chi-square test analysis and ranked using Spearman rank order correlation. From the research, it was found that the coping strategies which people used were effective but not sufficient. Based on the findings, we recommend use of multidimensional Strategic approach to food insecurity and should involve all food security stakeholders to ensure sustainability.

**Keywords:** Food Insecurity, Coping Strategies, Households, Bungoma County, Kenya

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## 1. Introduction

Food insecurity is a daily reality for hundreds of millions of people around the world. It is a recognized public policy concern for all countries in the world [1]. According to the World Food Programme [2], Sub-Saharan Africa is the most affected with an estimated 239 million people suffering from chronic hunger and malnutrition. The Africa Human development report of 2010 indicated that 12% of the world's population is food insecure [3]. Kenya's current food supply situation and outlook is a cause for concern. Based on the report by [4], fifteen million (approx. 50%) Kenyans are food insecure with 3 million in constant need of food relief. Households in Bungoma County are food insecure as many families take one meal a day, as revealed by household baseline survey done in Bungoma County [5].

Kenya's long-term goal of food self-sufficiency remains unmet. Food and Nutrition security is a key issue for Kenya as emphasized in various key government policy documents-

Vision 2030, Agriculture Sector Development Strategy (ASDS) and the Millennium Development Goals. Kenya has a population of more than 40 million people (10% food insecure) and growing at an annual rate of about three percent. It is the largest import market for food and agricultural products in East Africa [6]. Through various programmes, the government of Kenya provides extension services and farm input subsidies to farmers in an effort to promote agricultural production and productivity [7].

The county government of Bungoma put in place many food security strategies and initiatives which include provision of free seed, fertilizer and dairy cows to vulnerable members of society, free greenhouses for horticulture farming, subsidized fertilizer, tissue culture banana seedlings and many others [8].

All these interventions were geared towards solving the problem of food insecurity in the County. Households also had their own ways of coping with food shortages. This study, therefore, evaluated the effectiveness and efficiency of coping strategies used in tackling food insecurity within households of

Bungoma County in Kenya.

## 2. Methodology

### 2.1. Study Population

The participants for this study comprised of household heads who answered the questionnaires and community groups who were targeted for focus group discussions. Key informants were drawn from Non-Governmental Organizations, Community Based Organizations/Non-State actors, Faith Based Organizations and Government officials in Bungoma County, Kenya. These were interviewed to provide information on the various food insecurity coping strategies used in the region.

### 2.2. Materials

This study was carried out in Bungoma County (Figure 1). Bungoma County government has put much emphasis on vulnerable members of the society in the allocation of its resources. Food insecurity tops the list of priority areas for intervention by the county government of Bungoma [9]. Household baseline survey done by KARI, revealed that households in Bungoma county were food insecure [5]. According to the survey, the county has a poverty index of 52.9% compared with national average of 46%. Poverty and food insecurity are interlinked; and it is for this reason that this research was carried out to evaluate the strategies used by households to cope with food insecurity.

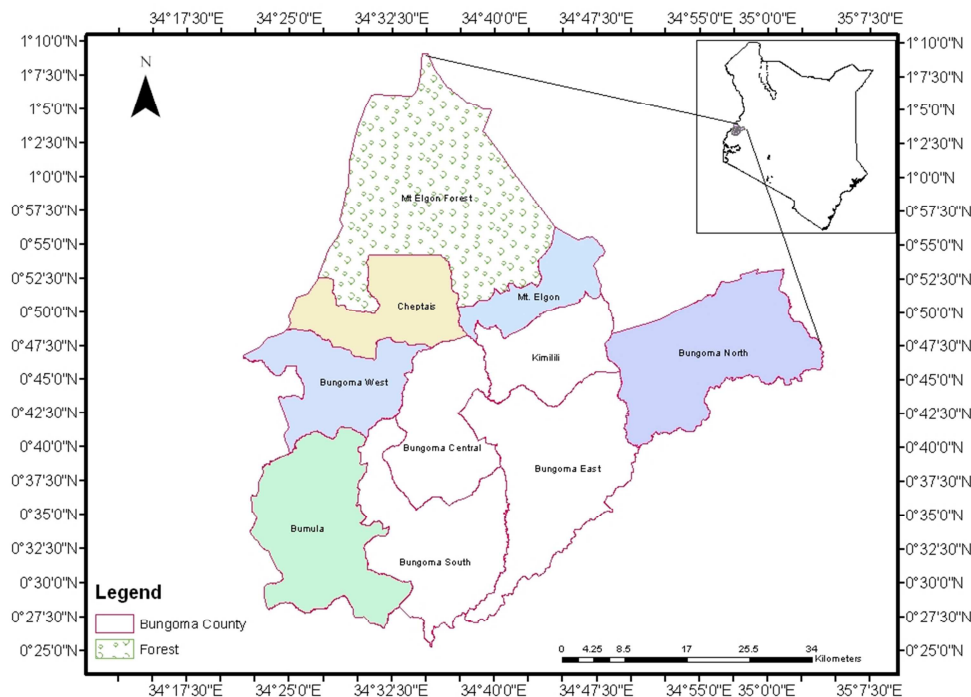


Figure 1. Map of Bungoma County, Kenya Source: Author (2013)

### 2.3. Procedure

This study utilized both primary data collected from the field and secondary data from archival sources like books, journals and reports. Primary data was gathered from the field using the following tools; structured questionnaires administered to household heads, Key informants interviewed, Focused Group Discussions (FGD) and observation checklists. Approximately 30 minutes was spent per interview session and 1-2 hours for each FGD session.

## 3. Results

### 3.1. Months of Food Scarcity in Bungoma County, Kenya

The study sought to establish the months of food scarcity to guide the planning for intervention by the county government. The findings were; 60% of the participants

quoted April-June, 25% quoted January-March, 12% quoted July-September, while 2% were for October-December. During the months of October to December, people had plenty of food as every household would have harvested or those who did not farm could purchase from those who had at a cheaper price. This finding is similar to what was found by the household baseline survey done by Kenya Agricultural Research Institute [5] in Bungoma County, where they found May to be a difficult month for most households in terms of food acquisitions. During the months of April, May and June, household resorted to all sorts of survival means to cope with hunger.

### 3.2. Household Food Insecurity Coping Strategies

Focus group discussions revealed the following strategies employed by households when food was scarce. Most people worked as casual laborers to earn cash money to buy food;

others reduced amount and frequency of meals eaten per day. Majority of the people ate one meal per day during the months of April, May and June. In extreme cases, assets like bicycles, poultry, shoats, trees and mobile phones were disposed off at a cheap prize. Elderly persons received food donation from relatives and cash from their children, while those credit worthy borrowed cash money to purchase food or bought food items on credit. The coping strategies were ranked as shown in Table 1.

**Table 1.** Household food insecurity coping strategies in Bungoma County, Kenya.

Coping strategy	% response	rank
Reduced no of meals	25	1
Received relief food	17	2
Received financial assistance	15	3
Worked for cash and food	12	4
Borrowed money	11	5
Bought food on credit	10	6
Mortgaged/sold assets	8	7

Source: Field (2013).

Whenever there was food shortage, reducing the number of meals eaten per day was the first coping strategy, especially for adults. Selling and mortgaging assets was always the last resort when all other avenues had been exhausted.

The report from key informants was not any different from household heads. They reported selling of assets like bicycles, poultry, shoats, trees, working for food and cash, leased sugar cane farms or land, people got loans from financial institutions, money lenders or Savings and Credit societies (SACCOs), and when it was very severe, they got donation of food from distant relatives- referred to as *khusakha* in their local language.

This finding is similar to what was found in the study done in Nepal [2] where strategies used during lean periods included; keeping some livestock for milk and butterfat, storing grain for up to five months on average and borrowing grains within the village (mainly from members of similar castes or from relatives).

Another study done in Tharaka in Central Kenya [10] also found similar coping strategies like reduction in size and number of meals eaten per day, restricting consumption of adults to allow more food for children. These strategies were neither sufficient nor effective because assets sold needed replacement when they had harvested, this meant that the cycle repeated itself every year. This kind of scenario calls for a more permanent solution than what they employed here.

Pearson Chi-square test ( $\chi^2_{8,0.000} = 23.360$ ) showed a highly significant association between coping strategies and the food security in the county since the  $p < 0.05$ :  $p$ - value = 0.000. This implied that the coping strategies reduced food insecurity in the study area.

The county government of Bungoma gave grants to vulnerable members of the community to start off income generating activities, which would enable purchase of food items. In as much as grants were given to groups but for how long was this to be done? Projects like *Njaa Marufuku Kenya* gave grants to groups [11] but food security did not improve. The County Government of Bungoma subsidized fertilizer [12], thereby making it affordable to most farmers but food security did not improve. These strategies alone were not sufficient to mitigate food insecurity.

### 3.3. Sustainable Food Insecurity Coping Strategies

Collectively, FGDs and Key informants suggested sustainable strategies if implemented in the area would see households remain food secure. They proposed that farmers should be trained on growing short season crops and post-harvest technologies, improved dairy farming and the costs of farm inputs (fertilizer and seeds) should be subsidized as well as be made accessible to all farmers. These suggestions were similar to recommendations by World Bank [13], whereby farmers in Malawi were provided with free farm inputs to start farming on small land portions as a strategy to curb food insecurity. For any approach to be effective there is need for sensitization and mobilizations of farmers on food security issues. Saving skills, networking with other stakeholders and lastly training on pests and disease control approaches can be a more effective strategy to food insecurity. All these suggestions are ranked in Table 2. The suggestions given here are in agreement with what United Nations Development Programme [3] recommended as strategies for improving rural household food security in Nepal.

**Table 2.** Food insecurity coping strategies ranked in Bungoma County, Kenya.

Coping Strategy	% response	Rank
Training on postharvest technology	20	1
Subsidize cost of farm inputs	17	2
Control diseases and pests	14	3
Avail farm inputs	11	4
Harvesting rainwater	6	5
Planting short season crops	3	6

Source: Field (2013).

### 3.4. Long Term Food Insecurity Coping Strategies

The study further sought to evaluate the long term strategies for coping with food insecurity: 20% of the respondents suggested establishment of processing facilities within the county, 10% suggested practicing conservation agriculture, 12% suggested introduction of irrigation farming, 8% said that stakeholders should be involved in the provision of agricultural services, 15% suggested that market for produce should be made accessible, 30% were for the adoption of new technology and farming technique on food

production, 10% proposed implementation of new strategies for food production like value chain approach and 8% suggested involvement of stakeholders.

Pearson Chi-square test ( $\chi^2_{8,0.000} = 36.470$ ) showed a highly significant association between long-term coping strategies by the households with the food security in the county since the  $p < 0.05$ :  $p$ -value = 0.000. This implied that long term coping strategies reduced food insecurity in the study areas in the county.

The suggestions given by FGD agree with the study done by Lewin and Fisher [14] in Malawi where they carried out focused group discussions to evaluate peoples' views on the determinants of food insecurity. Their study identified key policies that could reduce food insecurity like improving road infrastructure to access markets, agricultural extension services, irrigation, and investment in skills training and reduced cost of farm inputs. Some of these coping strategies were similar with the coping strategies identified by Wiley [15] among Tharaka Central Sub County households, which were seeking assistance for food from relatives and neighbors, sale of livestock and collecting bush fruits by poor households. The findings therefore were implicative that households in Bungoma County who are small scale farmers relied on a variety of coping strategies to counter their household food insecurity.

Bungoma County can adopt strategies like processing and value addition of farm produce, but they require increased volumes of farm produce to warrant establishment of processing plant and access to markets. The strategies of irrigation and conservation Agriculture can be very efficient and effective in tackling the problem of climate variability as was cited by FGD. The strategy of adopting irrigation is spearheaded by the Ministry of Agriculture, Livestock and Fisheries in the proposed irrigation policy that is expected to boost food production amidst climate variability in Kenya [9].

#### 4. Conclusions and Recommendations

The coping strategies employed in Bungoma County during food shortage were effective but not efficient/sufficient hence not sustainable; this explains persistence of food insecurity in Bungoma County. Based on the findings of the study, it was recommended that Strategies to address food insecurity should be multidimensional and involve all food security stakeholders. Strategies should be enshrined from one's own skill for it to be sustainable.

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