

Government Incentives Put in Place to Increase Maize Production: The Case of Western Region of Kenya
Impact of Government Incentives to Increase maize Production in Western Province of Kenya

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ABSTRACT

The introduction of SAPs (Structural Adjustment Programs) and trade liberalization which resulted in agricultural reforms in Kenya and other developing countries, the Kenyan government no longer gives incentives to small scale farmers. These has resulted in high production costs among small scale farmers due to high costs of inputs especially fertilizers. The study therefore sought to identify Government Incentives put in place to increase maize production in the agricultural reform era in Western Region of Kenya. The study used Ex-post facto research design via a cross sectional survey. Busia, Bungoma, Mt. Elgon and Lugari Counties were purposively selected to represent Western Region. Two Sub-Counties from each of the four Counties were selected by simple random sampling. For uniformity purposes 200 respondents were selected from focal areas through systematic random sampling hence ensuring that they all had been exposed to extension staff. Four key informants were sampled purposefully based on their positions of authority. Interview schedule containing both open and closed ended questions were used to generate information from respondents. Descriptive statistics with the help of Statistical Package for Social Sciences (SPSS) was used to analyze the data.

The study revealed that the government's support to the small scale farmers was minimal, and that there were changes such liberalization of the input market, National Cereals and Produce Board that did not favor the small scale farmer and this might have discouraged them from increasing maize production. The farmers in Western Region did not seem to be aware of the agricultural reform policies that required them to take charge of production and marketing of their maize. Government incentives put in place to encourage small scale farmers in Western Region to increase maize production has changed over the years. However, the small scale farmers were either not aware of these changes were not able to take advantage of these changes. The study recommended that the extension staff should teach the small scale farmers on the changes that have been brought about by SAPs and market liberalization and how to take advantage of such opportunities for example form strong common interest groups. .

Keywords: Agricultural reforms, Government incentives, Kenya, Small-scale farmers

INTRODUCTION

Since independence the government of Kenya has placed great emphasis on agricultural production. The government aimed at improving productivity of small scale farms through incentives such as agricultural credit, extension service, and provision of training, improved input supply and improved markets (GOK, 1965, 1974, 1989). In addition annual price reviews were carried out whose results were meant to assist farmers to meet the increasing cost of agricultural inputs. Furthermore, statutory marketing boards were set up to purchase, store and sell agricultural produce in order to smooth out price fluctuations and stabilize prices to the advantage of both consumers and producers (Karigi, 1998). With the introduction of SAPs (Structural Adjustment Programs) and trade liberalization which resulted in agricultural reforms in Kenya and other developing countries, the Kenyan government no longer gives most of these incentives to small scale farmers. Though the government of Kenya has put in place crops act whose objective is to accelerate the growth and development of agriculture in general, enhance productivity and incomes of farmers and the rural population, improve investment climate and efficiency of agribusiness and develop agricultural crops as export crops that will augment the foreign exchange earnings of the country, through promotion of the production, processing, marketing, and distribution of crops in suitable areas of the country (Republic of Kenya, 2013a) the reforms remain. In fact since 1990 the government has undertaken considerable macro and sectoral policy and institutional reform measures. These measures include the removal of foreign exchange controls, liberalization of interest rates, decontrol of petroleum and agricultural commodity prices, liberalization of imports and exports, rationalization of tariffs, and civil service and parastatal reforms (MARD (Ministry of Agriculture and Rural Development), 2001a). These has resulted in high production costs among small scale farmers due to high costs of inputs especially fertilizers. In addition, there are poor and long marketing chains, low levels of mechanization and high transport costs (Republic of Kenya 2010). These changes may have affected the maize production among small scale farmers. In fact currently maize production in Kenya is below the country's consumption requirements (Republic of Kenya 2010; 2013b). The study therefore sought to identify the Government Incentives put in place to increase maize production in the agricultural reform era in Western Region of Kenya. Comparison of how the farmers in the different Counties viewed these incentives were also considered.

Study Significance

Agricultural reforms and industrialisation was expected to initiate several new and powerful processes of transformation in the rural society. The role of policy makers has to change from directly intervening to that of supporting and facilitating with the initiative being left to the concerned groups of people (Rao, 1996). Small scale farmers therefore need to be motivated and equipped to handle these changes. There was therefore need to establish government incentives

put in place to encourage maize production among small scale farmers in Kenya, since 98% of Kenyan small scale farmers depend on maize production as a source of livelihood.

Research Design, Population and Sampling Procedure

Ex-post facto research design was used via a cross sectional survey. This was because the study used naturally occurring treatments on subjects having a self-selected level of the independent variables (Kathuri& Pals, 1993; Borg & Gall, 1993).

The study was conducted in Western Region which is administratively divided into eight Counties as shown on Figure 1, with the following agro-ecological zones: Busia and Teso – LM1 – LM2; Bungoma: UM1- UM4 – LM3; Kakamega and Lugari: LM1 – UM3 - UM4; Vihiga: LM3 – UM1 and Mt. Elgon. These include tropical Alpine to upper highland zones and lower upper highland to lower midland zones. The Region covers an area of 8436 Km² out of this 6670 Km² has potential for agriculture of which, 3591 Km² is cultivated for various crops. Rainfall is bimodal. The long and short rains come in March-May and August-November periods, respectively. Annual rainfall ranges from 900mm in Busia to 2100mm in Bungoma annually (MARD, 2002).

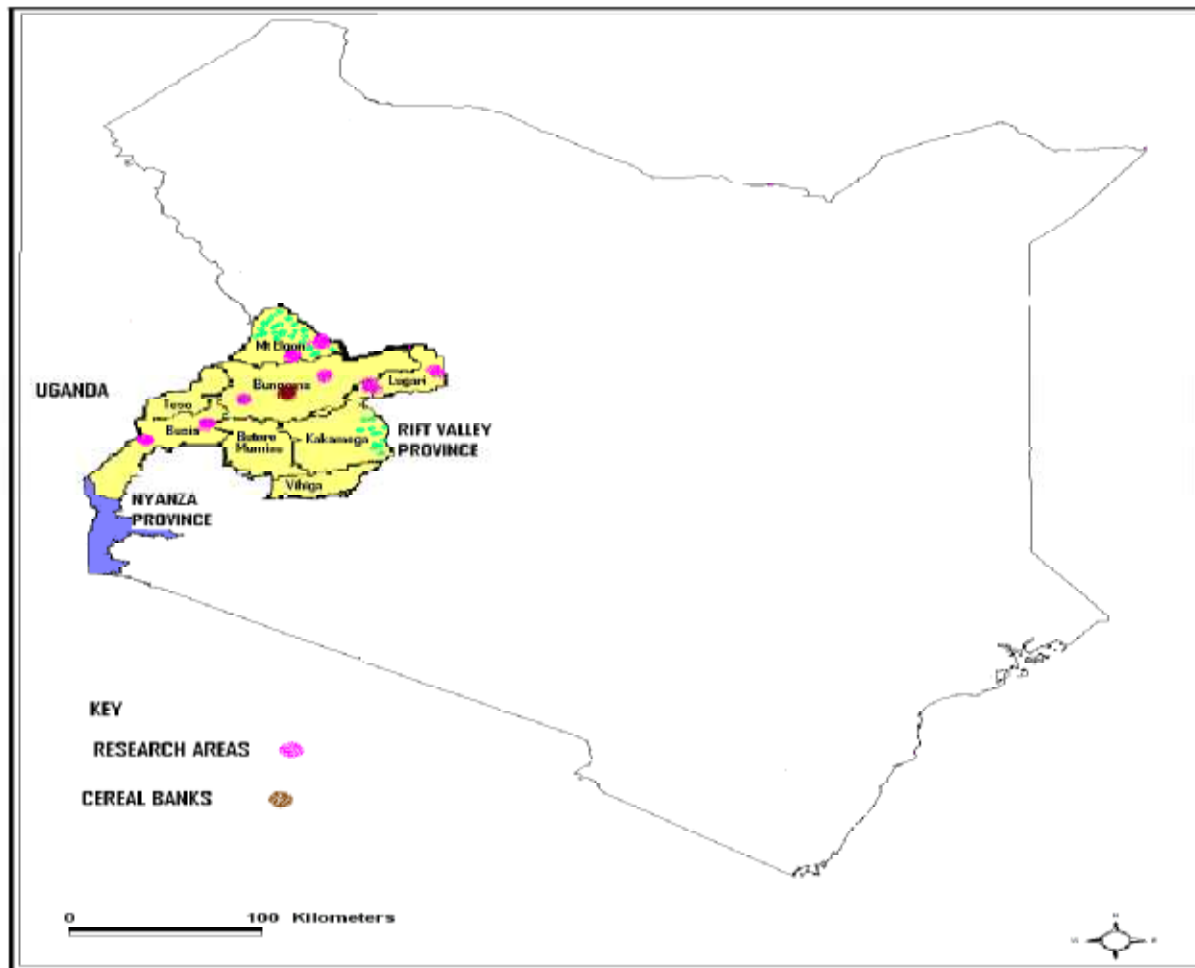


Figure 1: Map showing the Counties in Western Region of Kenya

The target population was made up of small scale farmers in Western Province. The accessible population consisted of 41,809 farm households in Lugari County, 158,370 farm households in Bungoma County, 19,746 farm households in Mt. Elgon County and 136,736 farm households in Busia County (Central Bureau of Statistics (CBS), 2001b).

Busia, Bungoma, Mt. Elgon and Lugari CountysCounties were purposively selected to represent Western Region because Busia County had the lowest average maize yields (7 bags per acre) in the Region while, Lugari County experienced the highest average maize yield (18 bags per acre) in the province, Bungoma (10 bags per acre) and Mt. Elgon (15 bags per acre) CountysCounties

were in-between in terms of maize yield (CBS, 2001b; MOA, 2006). In addition, the four Counties represented Western Region in terms of all the Agro-ecological zones that exist in the Region and therefore, results obtained could be generalized to the whole province.

Two divisions from each of the four Counties were selected by simple random sampling. The study divisions were Bumula and Webuye in Bungoma County; Kaptama and Kapsokwony in Mt. Elgon County; Funyula and Butula in Busia County and Lugari and Likuyani in Lugari County.

For uniformity purposes the respondents were selected from focal areas through systematic random sampling hence ensuring that they all had been exposed to extension staff. At the time of data collection, the extension staff had trained the farmers in one focal area per division and had moved to the next. The focal area approach which is under the National Agriculture and Livestock Extension Program (NALEP) aims at improving livelihoods of the poor rural households (MOA & ML&FD, 2006). In the focal area approach the extension staffs works in one area of approximately 400 farmers per year. The focal area is taken as a demonstration site where farmers from the rest of the division can learn latest technologies (Baiya, 2003). The key informants were sampled purposefully based on their positions of authority.

The sample size was arrived at using the following formula:

$$n = NC^2 \div C^2 + (N-1)e^2$$

(note: n=sample size; N=population size; C=Coefficient of variation which is 30%; e=margin of error which is fixed between 2-5%). The study sample was calculated at 25% coefficient of variation and 5% margin of error (Nassiuma, 2000).

Twenty five percent coefficient of variation was used to ensure that the sample was wide enough to justify the results being generalized for the Western Province. Higher coefficients of variation were not used to avoid very large samples due to limitation of research funds. Five percent margin of error was used because the study was an ex-post facto survey, whereby the independent variables could not be manipulated hence necessitating relatively higher margin of error.

The study sample is shown in Table 1.

Table 1: *Total Number of Subjects by Category from which the Sample was Drawn*

Category	Number of subjects	Sample size
House hold heads in Busia County		
Men	50,715	25
Women	86,021	25
House hold heads in Lugari County		
Men	23,831	25
Women	17,978	25
House hold heads in Bungoma County		
Men	82,385	25
Women	75985	25
House hold heads in Mt. Elgon County		
Men	8946	25
Women	10800	25
Key informants		4
Total	357,493	204

The key informants included the Provincial Director of Agriculture and Livestock Extension, the Provincial Crops Officer, an officer in position of authority in Agricultural Finance Corporation and an officer in position of authority at the National Cereals and Produce Board, Western Province.

Results and Discussion

The respondents were asked whether they thought that assistance from the government to small scale farmers had changed in the past two decades. A high percentage (60.6%) said that they had changed, 39% said that they had not changed while 0.4% said that they were not sure.

When asked what aspects of government assistance to small scale farmers had not changed, they said that AFC (Agricultural Finance Corporation) still charged high interest rates for acquired loans, demanded collateral and did not give loans to small scale farmers who had less than five acres of land under maize production. The respondents also said that there were few extension staff, research dissemination was still poor and that there were no free inputs given to farmers. On marketing, the respondents reported that payments from the National Cereals and Produce Board were still late and that the farmers were still being taken advantage of by middlemen. In addition, the respondents claimed that there were no markets close to them.

Similarly, the respondents said that they thought that assistance from the government to the small scale farmers had not changed because the prices of inputs were still high. The respondents added that the government had not controlled fake seed and that farmers did not practice what they had been taught due to lack of resources. According to Muchoge and Zziwa (2004) the Kenyan government planned to improve animal and crop protection, and to improve access to quality farm inputs. These have not been realised in Western Region of Kenya.

A key informant from the Ministry of Agriculture concurred with the farmers that there was a lot of fake seed in the market. The informant asserted that some areas had experienced crop failure due to fake seed. The fake maize seed resulted from liberalisation of the input market whereby Kenya Seed Company was no longer the only company providing maize seed to farmers. The informant said that though the Kenya Plant Health Inspection Services (KEPHIS) was expected to check the seed quality, the organisation was limited by shortage of staff and other resources. For example one office made up of twenty one officers covers the Western region which is made up of Rift Valley, Western, and Nyanza Provinces. The Western region offices are situated at the Busia Border, Malava Boarder, Nakuru and Kisumu and therefore were not able to cover the farmers adequately.

To ensure quality seed is available to farmers. All stockists have to make their application through the Ministry of Agriculture. The applications are then forwarded to KEPHIS for approval. In addition, in case of crop failure resulting from the fake seed, the farmers report to the extension staffs who in turn inform KEPHIS, which may sue the seed company. The penalty was however, too lenient, lamented the key informant. In the past the company would be charged Ksh. 4,000 or one month imprisonment. This was reviewed in 2003 to Ksh. 500,000 or six months imprisonment. This the key informant felt was not harsh enough for a company that may have caused crop failure, maybe to a whole location and many farmers may have lost thousands of shillings.

The respondents, who reported that government assistance to the small scale farmers had changed, cited both positive and negative changes. Those respondents who cited positive change said farmers' yields had improved and that there were improved marketing channels and improved roads. In addition, the farmers had been assisted to get loans and that the government had licensed more farm input stockists. The respondents further said that there were more demonstrations by extension staff, more farmers were adopting recommended practises and that inputs were being sold in smaller quantities, which the farmers could afford to buy.

The respondents who cited negative change reported that there were few extension staffs, credit conditions had tightened and the government had stopped providing inputs to farmers and that the government no longer regulated prices of farm inputs. From the respondents responses it was evident that the government's support to the small scale farmers was minimal, and that there were changes that had occurred that did not favour the small scale farmer and this might have discouraged them from increasing maize production. The farmers in Western Region did not

seem to be aware of the agricultural reform policies that required them to take charge of production and marketing of their maize.

Cross tabulations were carried out to compare the responses of the respondents from the study Counties as shown in Table 2. The results indicated that a relatively high percentage (27.6%) of respondents from Lugari County reported that government incentives for small scale farmers had not changed. They argued that this was because AFC loan conditions were still tough and that no loans were granted to small scale farmers of less than five acres of land under maize production. Similarly, a relatively high percentage of respondents from Bungoma County (14.8%) and Lugari County (13.8%) had not received any assistance from the government.

Table 2: Government Incentives ~~That~~that Have not Changed as Perceived by Respondents in the Study Counties

AFC conditions still Tough	No assistance from government	Fewer extension staff	Prices of inputs are high
Bungoma	1.9%	14.8%	1.9%
Lugari	27.6%	13.8%	0.0%
Mt.Elgon	0.0%	1.8%	28.1%
Busia	7.0%	1.7%	1.7%

The study further sought to find out whether the government had encouraged farmers in the study ~~Countys~~Counties to increase maize production. Most of the respondents (60.9%) reported that the government had not encouraged them to increase maize production. In fact only 38.3% reported that the government had assisted them in increasing maize production and less than one per cent said that they were not sure if the government had encouraged them to increase maize production or not.

The responses on whether the government had assisted farmers in Western Region to increase maize production varied from County to County. A high percentage (58.6%) of respondents from Mt. Elgon County said that they had been assisted by the government to increase maize production while half the respondents from Bungoma County indicated that the government had assisted them. On the contrary , most of the respondents from Busia County (66.1%) and Lugari County (87.1%) argued that they had not been assisted by the government to increase maize production.

The respondents who reported that the government had assisted them to increase maize production said that the government had done so through provision of extension service and provision of loans through the Agricultural Finance Corporation (AFC). In addition, they reported that the government had improved marketing channels through the National Cereals and produce board and provision of a variety of farm input stockists. Few respondents (1.3%) claimed that there were improved roads.

The highest percentage (31%) of respondents who alleged that the government had assisted them by providing extension service were from Bungoma County . It is interesting to note that few respondents from Lugari County (5.0%) and Mt. Elgon County (8.6%) viewed the deployment of the extension staff in their area as assistance from the government as shown in Table 3.

Table 3: Responses on Assistance given by the Government to Encourage Increased

Maize Production in the Study Counties_(%)

	Bungoma	Lugari	Mt.Elgon	Busia
Provision of extension service	31.0	5.0	8.6	22.4
Provision of AFC loans	12.1	1.7	3.4	0.0
Improving marketing channels	1.7	11.7	13.0	6.8
Provision of farm input stockists	1.7	1.7	36.2	0.0
Improved roads	0.0	0.0	5.2	3.4

This could be as a result of new approach taken by the ministry of Agriculture and Rural Development, and the Ministry of Livestock and Fisheries Development that farmers have to demand for services. Hence the extension staff rarely visited farmers' farms but the farmers were expected to visit the extensions staff's offices, or the farmers may form groups which the extension staff would visit to advice the farmers. If farmers did not take the initiative to visit the extension staff in their offices or were not members of farmer groups then they may not receive the services of the extension staff.

The results further revealed that 11.7% respondents in Lugari County and 13.0% respondents in Mt.Elgon County reported that the government had improved the marketing channels as shown in Table 4. This could be because a high percentage of respondents in Lugari County (51.7%) and Mt.Elgon County (22.4%) realised more than sixteen bags of maize per acre and therefore, they sold to National Cereals and Produce Board, which was a government institution. On the other hand, respondents from Bungoma County and Busia County realised low maize yields and therefore, did not sell their maize to the national cereals and produce Board.

In addition, the results revealed that a higher percentage of respondents from Mt.Elgon County (36.2%) said that the government had assisted in encouraging them to increase maize production by providing farm-input stockists. This could be as a result of the government liberalising marketing of farm inputs, resulting in many farm-input stores being opened up in various [CountysCounties](#). One of the reasons why farmers in Mt.Elgon County viewed provision of farm inputs as an encouragement from the government could be because more respondents had access to farm input stores. According to CNFA & AGMARK (2005) population per permanent stockist in Mt.Elgon County was as low as 1:4,333 as compared to 1:5,252, 1:7,272 and 1:12,625 in Bungoma, Lugari and Busia [CountysCounties](#), respectively.

The respondents who claimed that the government had not assisted them to increase maize production were asked how they would like the government to assist them. A high percentage of respondents (31.5%) suggested that the government ought to reduce the price of farm inputs, 28.3% said that the government should provide soft loans to farmers or simplify AFC conditions. In addition, 10.3% said that the government needed to assist the farmers in marketing their maize, 4.3% proposed that the government should post more extension staff in the area, while 25.6% did not respond to the question.

In further attempting to understand the influence of agricultural reforms and the government incentives on maize production in Western Region of Kenya, the extension staffs were asked about the changes that had taken place in the agricultural sector and how these changes had affected maize production. The results revealed that lack of government incentives had resulted in factors that had hindered maize production in Western Region of Kenya as shown in Table5.

Currently, in Western Province, like in the rest of the country, the government does not control prices or marketing of fertilisers and has abolished state controlled price levels on agricultural

products., In addition, the government has restructured state controlled marketing boards(World bank,1994; Kodhek, 2005).

Table 5: Factors Related to Government Incentives Hindering Maize Production In

<i>Western Region of Kenya as Reported by extension Staff</i>	
Factors Hindering maize production	Percentage
Poor marketing prices	33.3
Lack of organised markets	51.2
Fake inputs	27.4
High input prices	61.9
Poorly managed credit facilities	71.4
Unfriendly credit conditions	9.5
Lack of subsidies	— 7.1

Similarly, a high percentage of extension staff (84.5%) argued that either poor prices were offered or that there were no organized markets for maize. This was because the government did not set the price at which maize was bought nor did the National Cereals and Produce Board buy the maize from the farmers. These resulted in the farmers being forced to look for their own markets which most of the time was made up of middlemen who came to the farm gate. In addition, farmers sold their maize to the local market which usually was flooded with maize during the harvesting time.

Furthermore, due to liberalisation of trade the government allowed maize to be imported from neighbouring countries, which was sold at low prices , hence, giving maize farmers stiff competition for the maize market. The situation was made worse when farmers sold their maize immediately after harvesting because they needed the money due to their high poverty levels and could not afford to stock their maize and wait for higher prices

It was worrying to note that a relatively high percentage of extension staff (27.4%) reported that there were fake inputs such as seeds and fertilisers in the market as shown in Table 5. This was a problem that should be taken seriously by the government.

About 41% of the extension staff interviewed suggested that poor roads also hindered maize production in Western Province. This was because poor roads meant that farmers would spend more money on transport, thus resulting to low profits. Farmers are usually discouraged from indulging in enterprises with low returns as indicated by Guerin and Guerin (1994), and Lawrence, Rhodes, Grimes and Hayenga (1997). Furthermore, 32.5% of the extension staff reported that the farmers were demoralised by the changes that had taken place in the agricultural sector, including the presence of middlemen whom farmers felt were exploiting them.

Though the extension staff cited a number of factors that hindered maize production from agricultural reform era, they also reported a number of factors that had favoured maize production in the same era. This is as shown in Table 6.

Table 6: Factors that encourage Maize Production in Western Province.

Factors that encourage maize production percentage	
Farmers are able to choose from various maize varieties	28.6
Farmers are able to sell green maize	14.3
Farmers are seeking out extension staff	6.0
Farmers can sell their maize anywhere	15.4
Farmers Can afford to buy inputs	9.0
Focal area approach has promoted maize production	7.7
Provision of extension staff	12.2
Provision of extension Revived AFC,NCPB and KFA	18.9

It is important to note that there were a number of negative effects of agricultural reforms on maize production as seen in Table 5. These results are supported by Kodhek (2005) who pointed out that though market liberalisation is not complete, a number of sectors are not finding it to their liking. Damon (1999) further argued that though the proponents of trade liberalisation promised cheaper foods and food security, this has not been the case. The changes that have taken place in the agriculture sector due to SAP and trade liberalisation have also affected the efficiency of extension staff in assisting farmers.

Conclusion

Government incentives put in place to encourage small scale farmers in Western Region to increase maize production has changed over the years. For example, de-subsidisation of input prices, and liberalisation of input and product markets, among other changes. These were meant to improve the maize market therefore enabling the farmer to realise higher profits. However, the small scale farmers were either not aware of these changes were not able to take advantage of these changes. As a result maize production in the country has continued to decline and more small scale farmers whose livelihood is mainly maize production have continued to be impoverished.

Recommendations

1. The government should increase the number of extension staff and facilitate them to reach more farmers with improved agricultural packages and make follow-ups.
2. The extension staff should teach the small scale farmers on the changes that have been brought about by SAPs and market liberalisation and how to take advantage of such opportunities e-gan example being formation of strong common interest groups.
3. The government should improve infrastructure that is roads, electricity, telephone and postage services to facilitate input acquisition and maize marketing.

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