

OPPORTUNITIES AND CHALLENGES OF SUB-COUNTY AGRICULTURAL DEVELOPMENT PLANNING IN KENYA; THE CASE OF MOIBEN SUB-COUNTY IN UASIN GISHU COUNTY

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ABSTRACT

Agriculture continues to be the mainstay of Kenya's socio-economic development as over 80% of its population is engaged in agriculture. According to the Constitution of Kenya 2010, agriculture is a devolved function and every citizen has a right to be free from hunger, and to have adequate food of acceptable quality. This can only be realized through rapid spatial planning starting from the grassroots. Moiben-Sub-County is one of the six Sub-Counties comprising Uasin Gishu County which is considered as a bread basket of Kenya. The paper examines the performance of agriculture sector under a devolved system, highlighting its opportunities and challenges as well as making proposals and recommendations for sustainable Agriculture development in Moiben-Sub -County. Data was collected through interviews of; 58 sampled farmers, the Sub-County Administrator and the County Ministry of Agriculture, Two Focus Group Discussion were conducted. The land in the Sub-County has been utilized for crop production (30%), livestock production (25%), Settlement (10%), Forestry (5%) and infrastructure (30%). Agriculture is beset by a number of problems including, disease incidences, prolonged drought, diminishing land holdings, poor roads, increased soil acidity, high cost of inputs and poor pricing of agricultural produce. Devolution has had a rejuvenating effect in the agriculture sector in the Sub-County as evidenced by 57 % of the respondents strongly agreeing and agreeing with the statement that devolution has been a success, with 43.1% of the farmers indicating that they had participated in the Sub-County development activities. The farmers have benefitted from subsidized inputs, free training, free soil testing, and road improvement initiatives leading to improved production and opening up of opportunities for marketing. The County Government and other stakeholders should put as priority programmes in such areas as motivation of farmers not to subdivide their farms, provision of infrastructure and agro-support activities on value addition, in their development agenda.

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KEYWORDS: agriculture development, devolution, sub-county

INTRODUCTION

Agriculture forms the backbone of most economies in sub-Saharan Africa. In Kenya, agriculture has remained the mainstay of the economy since independence in 1963. Although its contribution to the GDP decreased from 35 per cent in 1963 to 25 per cent in 1996, it employs about 75 per cent of the labor force, provides most of the food requirements for the nation and earns the country about 60 per cent of the foreign exchange (Kenya;2007).

Moiben sub-county covers an area of 565.50km² with a human population of 138,408. It is situated at the northern side of Uasin Gishu County bordering Turbo constituency to the East, Ainabkoi and Kapseret to the South and Soy to the North. The sub county is further sub- divided into five county assembly wards namely Sergoit, Tembelio, Moiben, Kimumu and Meibeki wards.

This study was carried out in Moiben Sub-County which is also a Constituency within Uasin Gishu County in Kenya. The Figure 1 shows the jurisdictional area of Moiben Sub-County.

PROBLEM STATEMENT

Agriculture continues to be the mainstay of Kenya's socio-economic development as over 80% of its population is engaged in agriculture. According to the Constitution of Kenya 2010, agriculture is a devolved function and every citizen has a right to be free from hunger, and to have adequate food of acceptable quality. However these rights are not likely to be achieved unless proper planning for agriculture is done on the ground. Moiben Sub-County in Uasin Gishu County is the bread basket of Uasin Gishu County and by extension Kenya as a whole. It is a Sub-County which has numerous development variables including large scale farms,

fertile soils and flat topography important for mechanization. Moiben Sub-County is the leading producer of wheat and maize in the Uasin Gishu County. However the agricultural sector is beset by a myriad of challenges including; water shortage, livestock and crop diseases, inadequate extension services to the farmers and poor marketing infrastructure. There is also a challenge of land

fragmentation which leads to reduction of available land for agriculture and for other development priorities. An agriculture and environmental development strategy is needed to provide a panacea solution to development challenges facing agriculture in Moiben Sub-County.

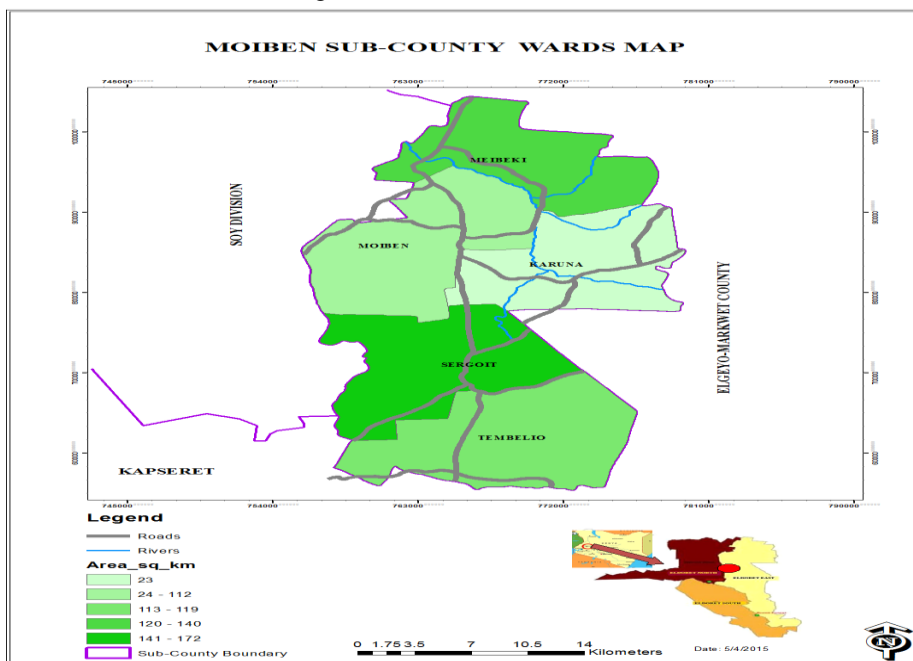


Figure 1: Moiben Sub-County
 Source: Uasin Gishu County Integrated Development Plan (2013)

OBJECTIVES

The purpose of the study was to determine the situational analysis of the agriculture sector in Uasin Gishu County with specific reference to Moiben Sub-County. The ultimate goal being to develop strategies for sustainable planning and development of agriculture in Moiben Sub-County. More specifically, the study objectives were;

1. to assess the performance of agriculture sector in Moiben Sub – County
2. to identify the challenges facing agriculture sector in Moiben Sub-County
3. to make policy recommendations for sustainable development of Agriculture

METHODOLOGY

The data for the study were acquired through primary and secondary data sources. The library research was done, with the County Integrated Development Plans (CIDP) document and reports touching on agriculture development in Moiben Sub-County being reviewed. A total of 58 land owners were randomly selected and interviewed using in depth questionnaires. Two Focus Group Discussions (FGDs) were conducted in Moiben Sub-County which informed the study on the

general situation of agriculture. The Key informants contacted during the study were mainly the County

Executive Committee Member in Charge of Lands, Housing and Urban Development; County Agriculture officer in Charge of Moiben Sub-County and the Sub-County Administrator of Moiben Sub-County. They gave their inputs in such areas as; land use patterns, crop and livestock production; infrastructure availability; constraints to agriculture development environmental considerations; county development planning and the future of agriculture from the dimensions of land use planning.

The data collected were analysed using Statistical Package for Social Science (SPSS). Programme. The results were closely knit with data which was obtained from FGDs in order to come up with proposals and strategies for Agriculture development in Moiben Sub-County.

RESULTS AND DISCUSSIONS

It was considered important to capture vital information on background information on the randomly selected respondents such as the level of education, age and gender. In this study, there were 36 (62.1%) male and 22(37.9%) were female. The

level of education was cross tabulated with the below;
 occupation and the results are presented in the table

Table 1: Background Information of the Respondents

Level of Education	Occupation					Total
	Farmer	Civil servant	self employed	Unemployed	Employed	
Primary	15	0	3	1	1	20
Secondary	11	1	2	0	2	16
College	7	3	3	0	0	13
University	2	2	0	0	1	5
Total	35	6	8	1	4	54

Source: Field Data 2015

From the table, it is noted that majority of residents of Moiben Sub –County have primary and secondary education levels, with a very small number having college or university education. The low level of education of farmers underscores the need to introduce tailor made educational courses that will help farmers to embrace modern agriculture techniques and which will translate into increase production in terms of agriculture outputs. It is also evident that majority of the respondents said that their occupation is farming (35) with only 6 civil servants, 8 self-employed and 4 who are employed in other sectors other than the civil service.

The respondents were also asked to state their average monthly income in Kenya shillings and majority of respondents (51.7%) said that they had an income of between 1 – 15,000 Kenya Shillings; 24.1% said they got 16,000 – 30,000 Kenya Shillings; while 5.2% earn 31,000 – 45,000 Kenya Shillings. Also only 3.4% said they have a monthly income of over 106,000 Kenya Shillings. It was established that Majority of these respondents (60%) have lived in Moiben Sub –county for a period of more than 11 years.

Land Use Characteristics

The study looked at the size of land size and land use patterns, type of farm structures, and sources of water and energy in the farms. The Figure below gives the findings on land sizes.

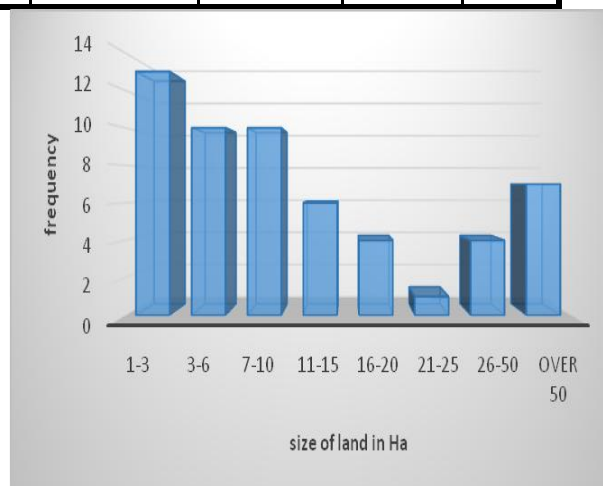


Figure 2: Land Sizes in Hectares

Source: Field Data 2015

From figure 2 above it is observed that majority (22.4%) of respondents said they had 1 -3 hectares of land, those who said they had between 3 – 15 ha were 51.6% while only 12.1% owned over 50 hectares of land. This shows that most of the residents of Moiben –Sub County have small farms, a fact which needs to be considered when developing land use plans for the Sub - County. In terms sources of water, the study revealed that the sources of water in the Sub-County are: piped water supply 8(13.8%), river and streams 6(10.3%), boreholes 44(75.9%). Some respondents also mentioned that they have dams within their farms and water tanks to harvest rainwater from roofs. From the data, it is clear that the main source of water in Moiben is boreholes as indicated in the Figure 3.

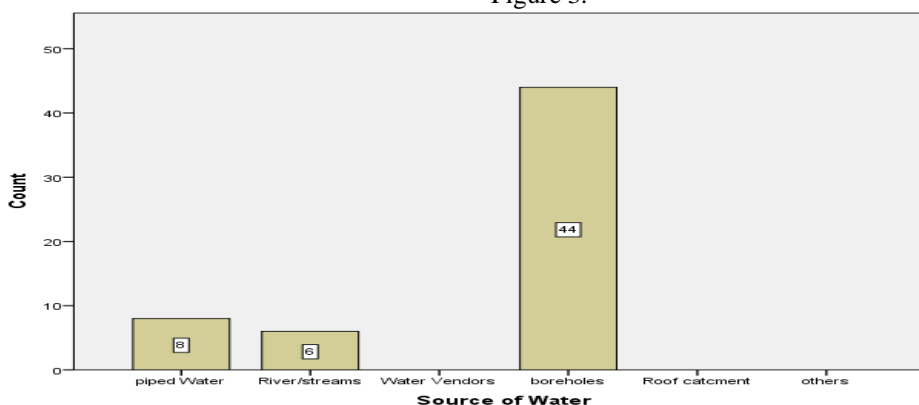


Figure 3 Sources of Water

Source: Field Data; 2015

The type of farm structures were also established and the results from the respondents showed that those with permanent houses were 22(37.9%), semi - permanent 37 (46.6%) while those with temporary houses were 6(10.3%). On sources of energy, the results are presented in the figure below;

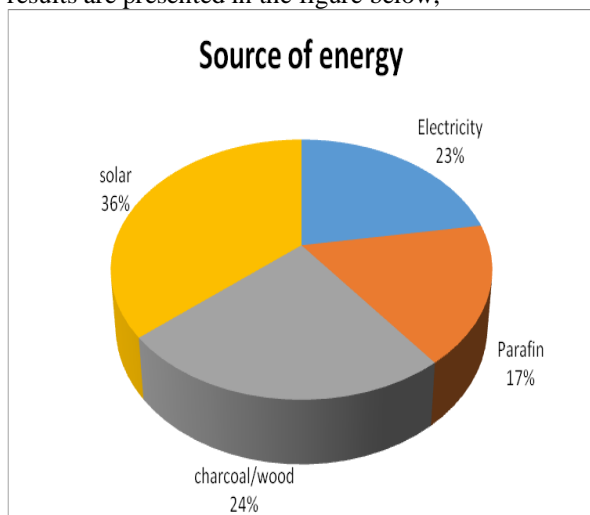


Figure 4: Energy Sources
 Source: Field Data 2015

The findings showed that there is still a high percentage of residents who use wood fuel as their source of energy. It is also notable that a high percentage of the respondents have embraced the use of solar. This therefore shows that electricity connections to households need to be looked into since electricity is reliable and versatile.

Agriculture Production

The study looked at the crop and livestock production in the area of study with a view to finding out the spatial land use patterns in terms of the type of crops; livestock production; forest cover and areas reserved for public utilities. The study also sought to establish the main challenges facing agriculture production in Moiben Sub-County.

On crop production, most respondents reported that they grow maize and wheat. Some planted beans with maize (intercropping) while there are a few who planted vegetables in green houses. In terms of crop production, the study established that beans is the least grown crop in Moiben Sub-County while maize and wheat are the most preferred crop in this area. This is an important finding since authorities will look into ways of providing support for farmers in terms of marketing and sensitization on new improved varieties of these crops. There is need to find out why beans is not grown in this area and devise ways and means of reversing this negative trend.

From the findings, the respondents reported that they faced challenges of disease, poor road transport network, high cost of inputs and lack of market for their produce.

On livestock production, the statistics of the number of livestock population in Moiben Sub-County are presented in the table below;

Table 2: Livestock Production

Number	Cattle	Sheep	Goats	Poultry
1 -5	29	11	3	4
6 -10	16	17	0	11
11 -20	3	2	2	2
16 -20	1	3	2	5
over 20	2	6	2	21
Total	51	39	9	43

Source: Field Data 2015

From the table, it is observed that majority of livestock farmers (51) kept cattle while only 9 farmers kept goats. Sheep and poultry were also noted to be kept by the farmers. From the table, it is also seen that majority of farmers(29) kept 1 – 5 cows as opposed to only 2 who kept more than 20 cows.

The problems experienced by livestock farmers seemed to be similar to those faced by crop farmers, and including; diseases incidences, lack of markets, high cost of inputs and poor state of roads. The respondents reported that they would wish that these problems to be addressed by the County government by improving roads and subsidizing inputs like seeds and fertilizers. Alternative source of markets needs to be found in order to deal with the problem of poor pricing of agricultural produce in Moiben Sub-County

On the issue of soil fertility, 52.2% of respondents noted that there is indeed change in soil fertility while 39.7% said they had not observed any change in soil fertility. It was established that soil fertility has been declining over time in Moiben Sub-County and hence the need to adopt sustainable agricultural practices that will restore soil fertility to its original state.

Environmental Management Issues in Moiben Sub-County

The study sought to determine the vegetation cover in Moiben Sub-County as well as to highlight the environmental issues and challenges faced by the respondents. Respondents were also asked to name common human health diseases in Moiben Sub - County.

On the percentage of land under trees, 65.5% of respondents said that they have 1-10% of their land under tree, which include species like eucalyptus,

cypress and indigenous trees. 8.6% said they had 11-20% of their land planted with trees while only 5.2% said that 50% of their land is under trees.

Table 3 below gives a summary of findings on environmental problems experienced in Moiben Sub-County as stated by respondents;

Table 3: Environmental Problems

Problem	Frequency	Percent
Overcrowding	1	1.7
Garbage disposal	2	3.4
De-vegetation	2	3.4
Air pollution	17	29.3
Dry weather	34	58.6
Water shortage	58	100.0
Total		

Source: Field Data 2015

From table 3, it is seen that the common environmental problem is shortage of water. This could be caused by dry weather thus making wells to dry up especially during the dry season. The respondents said that this problem should be solved by supplying piped water and drilling of boreholes in the area. On the common diseases, the respondents mentioned malaria, typhoid, brucellosis and amoeba as diseases that should be eliminated through curative and preventative measures.

County Development Planning

Kenya embraced a devolved system of government following the promulgation of the new Constitution of Kenya in the year 2010 and as such devolution in Kenya is yet to gain its full momentum. Respondents were asked to state whether devolution has been a success or not in their Sub-County and the results were as tabulated below;

Table 4: Perception of Respondents on the influence of devolution on Agriculture Development

Devolution has been a success	Frequency	Percent
Strongly Agree	13	22.4
Agree	20	34.5
Undecided	2	3.4
Disagree	14	24.1
Strongly Disagree	9	15.5
Total	58	100.0

Source: Field Data 2015

On participation in the Sub-County development meetings, 25(43.1%) of the respondents said that they have participated and even attended some Sub-County development functions while 33 (56.9%) said they had no idea about Sub-County development issues.

Most respondents also reported that they would wish the county government to address water challenges, improve roads, and sponsor rural electrification programmes, avail medicine in all existing Health

facilities throughout the year as well as building more Health facilities.

CONCLUSIONS AND RECOMMENDATIONS

Agriculture is the backbone of the Kenya's economy. According to Vision 2030, the agriculture sector alone directly contributes 26% of the GDP annually and another 25% GDP indirectly, annually. The sector also accounts for 65% of the country's total exports and provide more than 18% of the formal employment and more than 70% of informal employment (Kenya, 2007). Agriculture can be made more productive and vibrant through devolution of resources to the Counties and to the Sub-County levels. The problems that confront the agriculture sector in Moiben Sub-County are many and they include; frequent droughts, high costs of inputs and especially fertilizers and certified seeds, crop and livestock diseases, poor state of roads, high acidity of soils due to excessive use of fertilizers, poor pricing of farm produces; low production of some crops especially beans and diminishing land holdings leading to overall decline in agriculture production. For Moiben Sub-County to be made as an agricultural hub of Uasin Gishu County; North Rift Region and the Country at large; the following strategies and recommendations are proposed;

- a) The County Government of Uasin Gishu in collaboration with other stakeholders should put as priority programmes that will motivate farmers not to subdivide and sell farms. These may include provision of land titling programmes that will enable farmers secure their land and use their portions as collateral security for acquisition of credits for farm production. Because Moiben Sub-County is the only Sub-County in Uasin Gishu County which has large scale farms, the County should acquire land for land banking to cater for agriculture production and other future land use demands.
- b) Moiben Sub-County is not adequately served with road infrastructure. The poor road network is a major constraint to agricultural development as farmers are not able to access marketing outlets. There is need to tarmac a road from Eldoret –Iten Junction to Moiben Township upto Cheborwo area. Another tarmac road should be extended to link Moiben town and Ziwa road. All other roads in the Sub-County should be made as All Weather in order to enhance accessibility within the Sub-County.
- c) Moiben Sub-County is a water deficit area as it experiences a long dry spell every year. Access to water can be increased by rehabilitation of existing water dams, and sinking more boreholes. Roof water

harvesting and recycling of water, like the use of waste water in drip irrigation in Israel should also be encouraged. Irrigation schemes should be developed for production of horticultural crops such as tomatoes, onions and flowers especially in the lower areas of Moiben Sub-County, and more specifically in Chebororwa, Kapsiliot and Karandili areas.

- d) In order to increase the forest cover and to ensure continued fuel wood energy supply land owners should be encouraged to enforce the constitutional requirement that at least 10% of the land should be earmarked for forestry. This will contribute towards changing the micro-climate of the area and thereby reducing the long dry spell. The environmentally sensitive and fragile areas in Moiben Sub-County especially rivers and streams together with hills should be protected from encroachment and be planted with indigenous trees.
- e) The study found out that most farmers in the Sub-County have low level of education. There is need to engage the services of agriculture extension officers to sensitize and train farmers on use of modern farming techniques. Chebororwo Farmers Training Centre which is located in Moiben Sub-County should be made available for use by farmers as an incubation centre.
- f) In addressing the challenge of poor pricing of agricultural produce, farmers should be encouraged to embrace value addition involving processing of farm produce before being sold in the market. They need to form Cooperative societies that can be used to acquire machinery for processing of crops such as wheat, maize and milk as a strategy for value addition.
- g) Farmers in Moiben Sub-County should be encouraged to think about the possibility of adopting a Chinese policy of “One Village One Product” (OVOP). This approach aims at encouraging farmers to do business within themselves. Some farmers can be encouraged to specialize in wheat production while others can concentrate on maize production as an example. OVOP strategy can be used to improve the production of beans which the study established that it is on the downward trend.

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