

Research Application Summary

**Measurement of constraints' influence on cassava value chain development and commercialization in Migori County, Kenya**

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**Abstract**

Cassava is perceived fictitiously as a poor man's crop under neglect from most of the African farmers. But then, it has been noticed that it is consumed by both the rich and the poor, young and the elderly people under various settlement set-ups. Besides, its production still not optimized due to varied challenges attached. In Kenya, cassava is grown in relatively large scale in Nyanza, western and coastal regions with few patches in central and south rift valley regions. According to Food Agricultural Organization recent report, Cassava is an important food crop in Africa, and there are about 600 million people living on it. It is an important perennial crop whose roots serve as an important source of carbohydrates; in fact, most preferred staple food in some places, while others do grow it as a supplementary food crop to cereals. The study will be done in one of the leading regions in Kenya producing cassava for the significant results; Migori County. It is a county where there is immense cassava production, geographically located, experiencing weather conditions suitable for cassava agronomic activities hence giving a good study area for the sufficient and necessary data. There are three sub-counties with relative different levels of cassava production. For many years, the smallholder cassava farmers in the arid and the semi-arid areas as well as lowlands have been riding on production and marketing challenges which have made upgrading of their production a perennial challenge. There are strategies aimed at boosting cassava production and upgrading of its value chain and are dependent on: ongoing research efforts to multiply and distribute disease resistant and healthy cassava planting materials, farmers' extension services on various technical aspects and raising awareness to develop appropriate actions in line with Kenyan cassava policy (MoA, 2007).

Key words: Geographically, optimized, policy, poor, staple food, technical aspects

**Résumé**

Le manioc est perçu comme une culture des pauvres, négligée par la plupart des agriculteurs africains. Mais ensuite, il a été remarqué qu'il est consommé à la fois par les riches et les pauvres, les jeunes et les personnes âgées. En outre, sa production n'est toujours pas optimisée en raison de nombreux défis. Au Kenya, le manioc est cultivé à une échelle relativement grande à Nyanza, dans les régions occidentales et côtières avec peu de parcelles dans les régions du centre et du sud de la vallée du Rift. Selon un rapport récent de la FAO, le manioc est une culture vivrière importante en Afrique et environ 600 millions de personnes en vivent. C'est une culture pérenne importante dont les racines sont une importante source de glucides; il reste en fait, l'aliment de base le plus préféré dans certains endroits,

tandis que d'autres le cultivent comme culture alimentaire complémentaire aux céréales. L'étude sera réalisée dans l'une des principales régions du Kenya produisant du manioc dans le comté de Migori. C'est un comté où il y a une immense production de manioc, géographiquement situé, connaissant des conditions météorologiques propices aux activités agronomiques du manioc, donnant ainsi une bonne zone d'étude pour les données suffisantes et nécessaires. Il existe trois sous-comtés avec des niveaux de production de manioc relativement différents. Depuis de nombreuses années, les petits exploitants de manioc des zones arides et semi-arides ainsi que des basses terres ont relevé des défis de production et de commercialisation qui ont fait de l'augmentation de leur production un défi permanent. Il existe des stratégies visant à stimuler la production de manioc et à améliorer sa chaîne de valeur ; elles dépendent des efforts de recherche en cours pour multiplier et distribuer du matériel végétal de manioc sain et résistant aux pathologies, des services de vulgarisation des agriculteurs sur divers aspects techniques et de la sensibilisation pour développer des actions appropriées en conformément à la politique kényane sur le manioc (MoA, 2007).

Mots clés: géographiquement, optimisé, politique, pauvre, aliment de base, aspects techniques

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## Introduction

Over the years, cassava has been one of the crops grown to improve livelihoods and cushion smallholder farmers from food insecurity, in regions prone to droughts and maize crop failures. Cassava has enormous potential to become a crop that not only has an important role in managing famine in both rural and urban households, but can also generate income to smallholder farmers through its value chain development. Though not commercially used, it is the best known industrial crop in alcohol production due to its high starch content per unit compared with other starchy crops (Otieno, 2012). Cassava tubers cannot stay for long afresh once harvested which necessitates value addition to prolong storage. Despite the crop expansion efforts and measures put in by the various stakeholders led by the national government, farmers' response remains low. For instance, farmers still produce cassava on small patches of their land, with little or no value addition during consumption and marketing. Therefore, cassava value chain development would help in creating more market niches, making it more attractive for smallholder farmers to invest in and consequently improving livelihoods through increased income, (Ogendo *et al* 2016).

Small scale production and short shelf life have potentially negative influence on commercialization and opportunities for value addition among smallholder cassava farmers. Using the force-field analysis, this study aims to determine the status of cassava commercialization and value addition among smallholder farmers in Migori County. In Kenya, most cassava farming is ongoing in the Western, Coastal and semi-arid (Eastern) regions (Njeru and Munga, 2003). Currently, it is usually a subsistence crop grown for food and only the surplus is sold at farm gate to generate income. The growing cycle of cassava is relatively long, from 8 to 18 months for improved varieties, while some local varieties can take 24 months to mature. In Kenya, food security and poverty alleviation are some of the most important factors that the country must address in order to achieve the vision 2030. Cassava, is an important staple food crop of marginal and semi-arid areas of Kenya and production scale has risen from approximately over 61,573ha with an annual estimate production of 323,389 tons (FAO, 2010) to 858,461 tonnes; with average yields of 7-10 t/ha against a potential of 35-50 t/ha (MoAL & F, 2015).

It is cultivated mainly in the semi-arid regions and it has the potential to serve as a food security crop owing to its drought resilience. At the Kenyan cassava growing zones, most cassava is cultivated under mixed cropping systems together with cereal crops such as maize or grain legumes such as cowpea,

beans or green-grams.

### **General objective**

The main objective of the study is to analyze the contribution of cassava value addition to improved households' livelihoods among smallholder cassava farmers in Migori County.

### **Specific objectives**

1. To estimate the relationship between the land sizes for production and the marketed cassava products towards commercializing it among the smallholder cassava farmers in Migori County.
2. To determine the relationship between the ranges of value added cassava products and the scale of production among the smallholder cassava farmers in Migori County.
3. To estimate the contribution of value added products to the farm income among the households growing cassava in Migori County.

### **Methodology**

In Migori County, the leading sub counties in cassava production will be chosen namely Kuria west, Kuria east and Nyatike. Design for the study will follow a sub-sector approach and the technique employed involves conducting unstructured and informal interviews, administering questionnaires in addition to directly observing the real field situations in cassava growing regions. Secondary data sources will be an asset as reference and piloting the study. The study area has a population close to one million according to 2009 census, (KNBS, 2010). A baseline survey tool (questionnaire) will be developed under the consultation with the supervisor on the techniques to be used to gather detailed information from the wider farming community in the study region. Pre-testing of the questionnaire will be done prior to administering the questionnaires which then be revised accordingly to ensure accuracy of the information collected. The questionnaire will be administered to 153 cassava smallholder farmers randomly and systematically distributed equally among the three sub-counties covered by the study.

In sampling, non-probabilistic methods will be used such as: Purposive/judgemental sampling method since the cassava farmers are pre-determined in the region and they are depended on to provide data for the study objectives, Quota sampling as the cassava growing households will first be segmented into mutually exclusive sub-groups, just as in stratified sampling, convenience sampling will be conducted on farmers who are easily available, willing and accessible during research period and finally snow-balling sampling method; identified smallholder farmer will lead the researcher to the next farmer until the required sample size is achieved.

### **Expected results**

With the study area, the expected results will reflect the challenges that have been checking farmers from advancing cassava production and marketing from the respective sites. The relationships between scale of production to value chain development will be estimated. Contribution of cassava production in creation of wealth and minimizing food insecurity among the smallholder farmers found in the area covered by the study will be captured as well. This will be in comparison of the other potential and grown crops by the same farmers. Methods and suggestions that will enable

smallholder cassava farmers who have been facing identified challenges will also be devised and advised accordingly. Besides, assessment and analysis of production methods and levels will be done, enabling many farmers embrace and intensify cassava production as an alternative economic activity. Such expected enterprises will create several opportunities as the cassava value chain advanced, creating wealth to the concerned actors hence improving their living standards.

## **Conclusion**

The summary of the study will be done and various recommendations made having the objectives achieved. Having data obtained from the field and analyzed, respective stakeholders will be advised respectively on how to reduce or completely curb constraints, and more so, the policies will be made by the government that will support the objectives. The extent to which the cassava farming has contributed positively to the said farmers will be known and emphasized as well as the influence of such constraints on cassava value chain development. The government will have to empower smallholder cassava farmers in production. More farmers would have sensitized and trained on cassava farming as one way of creating wealth and fighting food insecurity across the country.

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