

**IMPACT OF SUGARCANE GROWING ON FOOD AND INCOME SECURITY OF THE
PEOPLE : A CASE STUDY OF BUZAAYA COUNTY, KAMULI DISTRICT**

BY

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DECLARATION

I **Basooma Sadick**, declare that this research report has not been previously submitted to this University or any other Higher Institution of Learning for any award.

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APPROVAL

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DEDICATION

I would like to dedicate this work to the Almighty God for his divine guidance, and to my beloved family members; Waiswa Jowali, Hanifa Nabatanzi, Matovu J. Isa, Mukyawe Saidi Nsamba, Lubaale Isaac, and all brothers and sisters, friends especially Tiyonga Robert, Julius Kijali, Tusiime Christopher, Anglos Allen, Nakimuli Peruth Agaaba, Kamizi Enock and many others for the endless advice and guidance throughout my studies.

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Basooma sadick

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ABBREVIATIONS AND ACRONYMS

FAO	Food and agriculture organization
FARA	Forum for agricultural research in Africa
GDP	Gross domestic product
MAAIF	Ministry of agriculture, animal industry and fisheries
MOFPED	Ministry of finance, planning and economic development
NAADS	National agricultural advisory services
NEMA	National environmental management authority
NEPAD	New partnership for African development
NREC	Natural resource and environmental coordinator
SLM	Sustainable land management
SMA	State minister for agriculture
UBOS	Uganda bureau of statistics
WMD	Wetlands management department

ABSTRACT

The main objective of the study was to determine the impact of sugarcane growing on food and income security in Buzaaya county. Simple random sampling was used in selecting sample farmers, where by five sub counties were selected, and two villages from each of the five parishes selected from each sub county were considered for detailed study. From each village, one small scale sugarcane farmer was selected randomly and all together 50 farmers were considered in the study. Data was analyzed at Univariate level (construction of frequencies) using SPSS and Excel.

From the study it was found out that people in Buzaaya county devote 66% of their land to sugarcane growing and only 34% to food crops growing. Using the net return analysis, it was found out that sugarcane growing is profitable though these profits cannot cater for all the requirements for household and also it is a monoculture form of farming that leads to soil degradation.

In conclusion, in order to solve the problem of food insecurity and also put into consideration the issue of land management in the area, the small scale sugarcane out growers should allocate quarter of their land to sugarcane growing, to only get that income to cater for small needs and the remaining portion of land to food crops growing. This will lead to production of enough food which will help farmers to earn maximum profits from the sale of food crop products and remain with enough food hence increasing incomes and reducing on food insecurity in Buzaaya County, Kamuli district.

Keywords: *Optimal allocation of resources, Sugarcane growing, Food crops growing, Food insecurity, and Income security.*

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Uganda's economy is heavily dependent on agriculture and over 80 percent of the labor force and 85 percent of its poor people are directly or indirectly engaged in agriculture, live in rural areas and depend on agriculture for livelihood and as source of income (NEPAD, 2004).

According to the state of environmental report 2010, agricultural sector in Uganda is composed of crop and animal production, forestry and fisheries and the associated trade and processing industries(MAAIF, 2009). Agriculture continues to dominate the Ugandan economy though at a continually declining level. Agricultural production contributed approximately 15.1 of the total GDP in 2009 down from 15.7 percent of GDP in 2007/2008. At current market prices, agriculture contributed 22.5 percent of GDP in 2010 compared to 23.7 percent in 2008/09and 21.2 percent in 2007/08 (FAO, 2010).

The sector's share of exports and employment however remained at 90 and 80 percent respectively in 2009.The sector also constitutes about 40 percent of manufacturing sector through food processing. The sector supports 24.6 million people of the estimated total Ugandan population of over 33 million people. In addition agriculture is important in stimulating economic growth through the supply of raw materials to agro industries, supporting the development of food Security system, income enhancement and employment (Kitutu et al., 2010). Agriculture is the most important sector of the economy, employing over 80% of the work force (Uganda economy profile, 2012).

The agricultural system in Buzaaya County is adopting majorly the sugarcane farming system which is practiced in most of the sub counties.A good percentage of the farmers in Kamuli do

REFERENCES

- Amos T.T. (2007). Analysis of Productivity and Technical Efficiency of Smallholder Cocoa Farmers in Nigeria, *Journal of social science*, 15: 127-133
- B. ndungu (2013). The Impact of Sugarcane Farming on Household Food Security in Belgut Division, Kenya; Retrieved from: <http://www.newvision.co.ug/news/651324-sugarcane-growing-causing-food-insecurity-study.html> on Tue, 2013-07-09.
- Dr.E. Mwavu, Vettes, K., & Bateganya F., (2013). Commercial sugarcane growing is accelerating food insecurity in Eastern Uganda, Makerere University Retrieved On Wednesday 24th/01/2014 from <http://www.bernama.com.my/bernama/v7/wn/newsworld.php?id=1007559> .
- F. Waswa, J. P. Gweyi-Onyango&Mwamburi, M. (2011). Contract sugarcane farming and farmers' incomes in Lake Victoria basin Kenya, Published online at on April 30, 2012.
- FAO (2010).Uganda Nutrition Profile 2010.Nutrition and Customer Protection Division.Food and Agriculture Organization of the United States. Accessed on 26/5/2013 from <ftp://ftp.fao.org/ag/agn/nutrition/ncp/uga.pdf>
- FARA (2004): Sub-Saharan Africa Challenge Programme. Proposal Volume 1. Building sustainable livelihoods through Integrated Agricultural Research for Development. Accra, *Forum for Agricultural Research in Africa*, pp, 260-266, April 2010
- G. W. Netondo , F. Waswa, L. Maina, T. Naisiko, N. Masayi& J. K. Ngaira (2010) .Agro biodiversity endangered by sugarcane farming in Mumias and Nzoia Sugar belts of

Western Kenya. *African Journal of Environmental Science and Technology* Vol. 4(7), pp. 437-445, July 2010

G. Shively & Jing Hao, August (2012). A Review of Agriculture, Food Security and Human Nutrition Issues in Uganda. Retrieved on 05/feb/2013 from <http://ugandaradionetnetwork.com/a/story.php?s=40922#ixzz1vPLdVNr4>.

Gabriel S. Umoh (October, 2005), resource use efficiency in urban farming: an application of a stochastic frontier

M.D. Misango & Dr. D.V.N. Raju. (2010). Soil management approaches for sustainable sugarcane production. Retrieved on 11/November/2011 from <http://www.kakirasugar.com/content/about-us>.

MAAIF (2009). *Agricultural production statistics, ministry of agriculture, animal industry and fisheries; Kampala, Uganda*

MoFPED, (2009). *Background to budget. Ministry of finance, planning and economic development; Kampala Uganda*

N. Kibet, J.K. Lagat & G.A. Obare (2011). Identifying Efficient and Profitable Farm Enterprises in Uasin-Gishu County, in Kenya. *Asian Journal of Agricultural Sciences* 3(5): 378-384, 2011

Nelson Wesonga (2012). The sweet lure of sugar leaves Busoga farmers exposed to insecurity. Accessed from <http://tinywesonga.blogspot.com/2012/08/the-sweet-lure-of-sugar-leaves-busoga.html> on Wednesday, August 29, 2012

NEMA (2010). *National State of the Environment Report, 2010. National Environment Management Authority, Kampala Uganda*

NEPAD (2004). New partnership for African development. Accessed on 10-may-2005 from <http://www.tandfonline.com/doi/abs/10.1080/17531055.2012.669569>, 10 May 2012.

S.P. Singh, B. Gangwar & M.P. Singh, (2008). Economics of Sugarcane-based Farming System in Western Uttar Pradesh. *Agricultural Economics Research Review* Vol. 21 January-June 2008 pp 109-117

Stephen Otago (2013). The rising number of sugar factories in the Busoga have threatened food security, accessed on Jan 11, 2014 from <http://www.monitor.co.ug/Business/Commodities/Sugarcane-farming-threatens-food-security-in-Busoga-/-/688610/1941614/-/13hnt9gz/-/index.html>

AA Tijani (2006) Analysis of the Technical Efficiency of farming in Ilesha Land of Osun State, Nigeria vol 45, No 2

UBoS, (2010). Uganda Census of Agriculture for 2011/2012, volume iv Accessed <http://www.infonet-biovision.org/default/ct/123/crops> on 1st/06/2013

Uganda economic profile (2012). Accessed on 26th/5/2013 from <http://www.indexmundi.com/Uganda/economy-profile.html>

Varalakshmi. K. July (2007): Optimum Crop Enterprise Mix for the Farmers in Panyam Mandal of Kurnool District Andhra Pradesh. Retrieved from <http://www.answers.com/topic/crop-combination-analysis>, on 26/july/2007.

WMD (2011). Submission for the State of Environmental Report 2010, Wetlands Management Department, Ministry of Water and Environment, NEMA 2010, Kampala.

World Bank (2006). *Enhancing Agricultural Innovation: How to go beyond the strengthening of research systems*. Washington, DC: Agriculture and Rural Development.