



BUSITEMA UNIVERSITY

FACULTY OF NATURAL RESOURCE  
AND ENVIRONMENTAL SCIENCES

IMPACT OF TOBACCO GROWING ON FOOD AND INCOME  
SECURITY OF THE PEOPLE OF AII-VU SUB-COUNTY, ARUA DISTRICT

BY

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**DECLARATION**

I Edeti Favourate declare that this work is original. It has been done by me and has not been previously submitted to this university and by any other person to obtain any other qualification in the institutions of higher learning.

Signature ..... 

Date..... 07/07/2017

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**APPROVAL**

This dissertation report has been done under my supervision and guidance as the university supervisor.

Signature.....

Date.....

**Ms ARIANGO ESTHER**

## DEDICATION

This work is being dedicated to my dear lovely parents Mr. Obeti david, Ms. Ezaru Lucy, relatives like Maliamungu Jacob, Acidri Joseph, brothers and sisters like Alioni Joseph, Bako Annet, Andama Samuel, Anduma sydney and friends like Lenia Mourine, Ejoyi Liberty, Mr. Mabirizi Julius, Segawa Frank, Abio Annet, Kato Joseph Driichi, Acidri Denis, Ngorok Simon Peter, Elungat Moses, Lajara Beatrice, Kembabazi Hollen, Obiga Sinad, Mutesi Noeline, Aitu Harriet, Ocokoru Peace.

May the almighty God bless you and reward the works of your hands abundantly.

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## ACRONYMS/ ABBREVIATIONS

NEPAD	New Economic Program for African Development
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
W H O	World Health Organization
FCTC	Framework Convention on Tobacco Control
CTCA	Centre for Tobacco Control in Africa
MFPEd	Ministry of Finance Planning and Economic Development
GTS	Green Tobacco Sickness
ILO	International Labour Organization
NGO	Non Governmental Organization
UN	United Nations

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## ABSTRACT

The study was done to determine the impacts of tobacco growing on food and income security of the people of Aii-vu sub-county, Terëgò county, Arua district. Data collected included the size of land people allocated for growing tobacco and food crops, food crops grown in the area before tobacco became prevalent, income that people attain from tobacco growing in relation to food crops and costs incurred to grow tobacco up to when it's sold in comparison to food crops. Simple random sampling was used to select the farmers, a total of 72 respondents were interviewed. Six parishes were selected from the sub-county, two villages were sampled from each of the parishes selected and six respondents were selected from each village. The study used interview guides, questionnaire answering by respondents, documentary analysis and direct observation to collect data. The data collected was analyzed using at Univariate level (construction of frequencies) using EXCELL and SPSS.

From the study it was found out that 62.4% of the land was devoted to tobacco growing and 37.6% was devoted to food crop growing. And 81.6% of the food crops disappearing were the major and the staple food crops in the areas. Using the analysis on the gross revenue and the costs, it has been found out that tobacco growing is a profitable venture if well planned though these profits cannot fully sustain all the necessary household requirements. The monoculture form of farming and too much use of chemicals to grow tobacco destroy the soil and limits growing of other crops especially food crops.

Based on the study the recommendations made were: to solve the problem of food insecurity in Aii-vu sub-county, both the large and small scale tobacco farmers should at least give half of their land for food crops if they cannot give three quarter of their land for food crops and they use the other part for tobacco only to get income to cater for small needs. This will lead to increased production of food which can easily be used to supplement on income as food is made available unlike tobacco which only brings income but cannot be eaten as food, improved and resilient seeds and planting materials for food crops should be provided by the government to the people since tobacco degrade the soil so much, regulation of tobacco prices by the government, providing technical know-how for the farmers to manage both tobacco and food crops in a sustainable manner, improvement on infrastructural facilities to enhance easy transportation and marketing of both tobacco and food crops and provision of meteorological information to the

farmers in order to deal with bad climatic conditions backed up by provision of water sources. These will increase the income of the people of Aii-vu sub-county with enough food.

**Key words:** Tobacco growing, food crop growing, food insecurity, income insecurity, sustainable or optimal allocation of resources.

## CHAPTER ONE: GENERAL INTRODUCTION

### 1.1 Introduction

This chapter covers back ground to the study, problem statement, general objective of the study, specific objectives of the study, research questions, justification, conceptual frame work, and report layout.

### 1.2 Background to the study

Uganda's economy is heavily dependent on agriculture just like any other African countries with cash crop production for export and local consumption and over 80% of the labour force of the country and 85% 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.

The main cash crops of Uganda include coffee, tea, cotton, tobacco. In Uganda tobacco is currently grown in areas such as Arua and Maracha, Yumbe districts in west Nile, Gulu, Lira, Masindi, Hoima, Mubende and Rukungiri (Onzima and Birikunzira, 2001). Tobacco was first introduced in early 1920's and it has risen today to become a major source of revenue for many rural homes and the government of Uganda in form of taxes collected from tobacco companies. Tobacco holds an unparalleled position among crop plants (Akehurst, 1968). It is one of the very few crops entering world market entirely on leaf basis and plays an important part in international trade. It is most widely grown commercial non-food plant in the world (Taylor, 1927). As tobacco control measures continue to gain momentum around the world, various stakeholders have expressed concern that these policies are likely to have serious negative effect on the economies of tobacco producing countries. The world health organization framework convention on Tobacco control (WHO FCTC) is to curtail tobacco consumption to the greatest extent possible. For individuals and nations involved in tobacco production and marketing, this is

2. Research on the comparison of tobacco growing as an enterprise with other enterprises like petty businesses, boda boda riding, mechanical works, tailoring, carpentry and others from a farm management and agricultural economics point of view.
3. Relating the variable tobacco growing with food and income security in order to identify its impact on the welfare of the people.
4. The effects of tobacco growing on the soil health in the sub-county in relation to growth of food crops.
5. The impact of tobacco growing on forest resources in Aii-vu sub-county.

## REFERENCES

African Development Bank Group, 2011-2015 Country Strategy Paper, November, Altman, D., Klein, M., and White, W. (1998) Green Tobacco Sickness. *Tobacco Control* 7: 294-298, and Bangladesh. Dhaka, PATH Canada, 2002.

Arcury T, S Quandt. 2006. Health and social impacts of tobacco production. *Journal of Agromedicine* 11, 3-4.

Bangladesh Bureau of Statistics. Foreign trade statistics of Bangladesh 1997-1998.

Bangladesh Bureau of Statistics, Report of the Household Income and Expenditure BBS, Statistical Yearbook of Bangladesh 2009

Bialous SA. Corporate practices undermining the implementation of economically sustainable alternatives to tobacco growing. Study conducted for the second meeting of the study group on economically sustainable alternatives to tobacco growing, Mexico City, 17-19 June 2008.

Central Statistical Office (Zambia), Living Conditions Monitoring Survey (LCMS),  
Chirwa, E.W. (2011) Competition Issues in the Tobacco Industry of Malawi, Paper prepared for  
UNCTAD Secretariat, United Nations, New York and Geneva.

Cycle of poverty in tobacco farming: tobacco cultivation in Southeast Asia. Bangkok, Southeast  
Asia Tobacco Control Alliance (SEATCA), 2008.

Deb R and Sujon A I. Tobacco farmers in Bangladesh: exploitation at the hand of the  
Dhaka, Government of Bangladesh, Ministry of Planning, 1998.

Dhaka, World Health Organization, 2005 (Revised in 2006).

Extensive cultivation of tobacco is creating food crisis in Bangladesh by Farida Akhter,  
UBINIG, 2010

FAO, 1999. State of the world's Forest. FAO, Forestry Department

Fertilizer use by crop. Rome, Food and Agriculture Organization of the United Nations, 2006.  
Food and Agriculture Organization, FAO Statistics Database, 2015

Geist H. Global assessment of deforestation related to tobacco farming. Tobacco Control, 1999,  
8:18-28.

Global assessment of deforestation related to tobacco farming. Tobacco Control 1999;8:18-28.

Graen, L. (2012) Opening Malawi's Tobacco Black Box, Magisterarbeit, Martin Luther  
University of Halle-Wittenberg.

Gupta PC, Asma S (Eds): Bidi smoking and public health. New Delhi, Ministry of Health and Family Welfare, 2008.<http://www.who.int/trade/glossary/story089/en/>.

Hu, T., and Lee, A.H. (2015) Tobacco Control and Tobacco Farming in African Countries. *Journal of Public Health Policy* 36(1):41-51.

ILO, 2014: international program on the elimination of child labour in tobacco growing.

Impact of small scale tobacco growing on the spatial and temporal distribution of Miombo woodlands in Western Tanzania. *J Ecol Nat Environ* 2010;2:10–16.

Kaiser, D. et al. Water contamination by nitrate and pesticide in a small watershed under tobacco cultivation. Paper presented at the 19th World Congress of Soil Science, Soil Solutions for a Changing World, 1–6 August 2010, Brisbane, Australia.

Kenneth E. Warner KE. The economics of tobacco: myth and realities. *Tobacco Control*, 2000, 9:79–89. Summary on possible alternative crops. Paper presented at the third meeting of working group on economically sustainable alternatives to tobacco growing (in relation to Articles 17 & 18 of the WHO FCTC), Geneva, Switzerland, 14–16 February 2012.

Köchhar , S.L 1981, *Tropical crops. A text book of economic botany*, university of Delhi Macmillan 467p

Makoka, D. (2008) *Risk, Risk Management and Vulnerability to Poverty in Rural Malawi*, Cuvillier Verlag Göttingen, ISBN-10: 386727746X; ISBN-13: 978-3867277464 McBride.

Onzima,J,R and Birikunzira , J.B 2001. Tobacco as found in agriculture in Uganda volume II Crops, NARO pub. Fountain/CTA/NARO.p 500-519

Prowse M. A Comparative Value Chain Analysis of Burley Tobacco in Malawi - 2003/4 and 2009/10. Institute of Development Policy and Management; 2011.



Soil mining and societal responses". In: Lohnert B, Geist H, eds. Coping with Changing Environments. Aldershot: Ashgate Publications, 1999.2010.

Survey 2000. Dhaka, Government of Bangladesh, Ministry of Planning, 2003.

Tobacco and deforestation in the developing world. Tobacco Control 1994;3:191.

Tobacco Board of Zambia, Presentation by CEO of Tobacco Board of Zambia, 2015  
tobacco companies. In: Efroymsen D, ed. Tobacco and poverty: observations from India.

WHO report on the global tobacco epidemic, 2008. Geneva, World Health Organization, 2008.

World Health Organization. 2015. "Tobacco." Available at: World Health Organization. Impact of tobacco-related illnesses in Bangladesh.

Yearbook of Agricultural Statistics of Bangladesh, 2009, Bangladesh Bureau of Statistics, Ministry of Planning, GOB, August 2010

Zeballos EJ. Food, drink and tobacco industry driving rural employment and development (fact sheet).