

---

**ASSESSING THE EFFECTS OF MAIZE PRODUCTION ON FARMER'S INCOME IN  
BWIKHONGE SUB-COUNTY, BULAMBULI DISTRICT**

**BY**

**WETUMA PETER**

**BU/UP/2019/1095**

**[Wetumapeter21@gmail.com](mailto:Wetumapeter21@gmail.com)**

**A DISSERTATION SUBMITTED TO THE DEPARTMENT OF AGRIBUSINESS AND  
EXTENSION, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
AWARD IN BACHELOR OF AGRIBUSINESS AT BUSTEMA UNIVERSITY**

**MAY, 2023**

**DECLARATION**

I hereby declare that this is my original work in this research dissertation was done personally with my own knowledge and ideas. And has never been submitted to any institution of higher learning for any award.

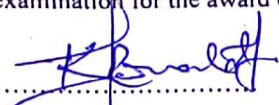
Signature.....


Date. 8<sup>th</sup> 06/2023.....

NAME: WETUMA PETER  
REG. NO: BU/UP/2019/1095  
(Researcher)

**APPROVAL**

This research report has been submitted with my approval as the university supervisor and is now ready for examination for the award of Bachelor of Agribusiness at Busitema University.

Signature.....

Date.....

Dr. KABBIRI RONALD  
(Research supervisor)

## **DEDICATION**

This research report is dedicated to my supportive family for all the kinds of support financially and advises grateful to me who helped to progress with my academic education at Busitema University

## **ACKNOWLEDGEMENT**

I wish to extend my gratitude to the almighty GOD for the gift of life and enabling me to complete my research report successfully.

I wish to extend my deep heartfelt gratefulness to Dr. Kabbiri Ronald, the university research supervisor for his time, guidance and endless support he has always given to me during the supervision of this research report.

I also wish to extend my sincere gratitude to my brothers and sisters for their support and love they have accorded to me and not forgetting my dear friends at the university

## ABSTRACT

Maize production in Bwikhonge Sub County is reduced over the last decades. Many problems are creating in maize production. Which are technical, marketing, and social problems? The technical problem includes lack of financial capital, lack of quality seeds. Marketing problems include low cost of maize production, high cost of maize inputs. The present study aims to find the socioeconomic characteristics of maize producer, assess the contribution of maize production and also estimate their profit function from maize production. Data was collected from five parishes of the sub county. Namely, parishes, Bulumera, Bwikhonge, Buwabwala, Bunalwere, and Buwekanda. Primary data has been collected from 70 farmers. The simple random sampling has been followed, both statistical and tabulation analysis were applied in this study. Among the respondents, male were 39 comprising of 55.7% and female were 31 comprised of 44.3% of selected sample size. A simple average method was used for finding the results. The majority 57.1% respondents reached in primary, 30% attained secondary level, 4.3% reached tertiary level and 8.6% were illiterate. The perception of the respondents on the benefits indicates that 2 out of the 9 benefits under consideration were significant (mean score  $\geq 3.00$ ). The most important benefit was that of families hardly suffers from hunger (mean score =3.71). This was followed by the purchase of clothes for self and family with ease (mean score =3.39). Finally, the total revenue was UGX.2,239,584.29 and total cost was UGX.949,558.57 per hectare in the research area. The Gross margin profit was UGX.1,290,025.72. It is recommended that the government should provide these inputs and other related support lead to an increased significantly in maize

## TABLE OF CONTENTS

DECLARATION.....	Error! Bookmark not defined.
APPROVAL .....	Error! Bookmark not defined.
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
LIST OF ABBREVIATIONS .....	viii
LIST OF FIGURES.....	ix
LIST OF TABLES.....	x
<b>CHAPTER ONE: INTRODUCTION .....</b>	<b>1</b>
<b>1.1 Background .....</b>	<b>1</b>
<b>1.2 Problem Statement.....</b>	<b>2</b>
<b>1.3 Objectives.....</b>	<b>2</b>
<b>1.3.1 General Objective .....</b>	<b>2</b>
<b>1.3.2 Specific Objectives .....</b>	<b>2</b>
<b>1.4 Research Questions .....</b>	<b>3</b>
<b>1.5significance of the study.....</b>	<b>3</b>
<b>CHAPTER TWO:.....</b>	<b>4</b>
<b>2.0 LITERATURE REVIEW .....</b>	<b>4</b>
<b>CHAPTER THREE: RESEARCH METHODOLOGY.....</b>	<b>7</b>
<b>3.1 The study area .....</b>	<b>7</b>
<b>3.2 Conceptual framework.....</b>	<b>7</b>
<b>3.3Research design.....</b>	<b>7</b>
<b>3.4 Sampling design .....</b>	<b>7</b>
<b>3.5 Observation design.....</b>	<b>8</b>
<b>3.6 Data analysis.....</b>	<b>8</b>
<b>3.7 Data presentations .....</b>	<b>8</b>
<b>3.8 Data collection .....</b>	<b>9</b>
<b>3.8.1Questionnaires.....</b>	<b>9</b>
<b>3.8.2 Documentary .....</b>	<b>9</b>
<b>3.9Research limitations.....</b>	<b>9</b>

<b>CHAPTER FOUR: RESULTS PRESENTATION AND DISCUSSION</b> .....	10
<b>4.1 Demographics/ Socio-economic characteristics of the respondents</b> .....	10
<b>4.2 Perceived benefits derived from maize production</b> .....	12
<b>4.3 The profitability estimation</b> .....	12
<b>4.3.1 Maize production cost</b> .....	12
<b>Table 3: cost of maize production</b> .....	13
<b>4.3.2 Gross Margin estimation</b> .....	13
<b>Table 4: gross margin estimates for maize production per hectare</b> .....	14
<b>CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS</b> .....	15
<b>5.1 Conclusion</b> .....	15
<b>5.2 Recommendation</b> .....	15
<b>References</b> .....	16
<b>APPENDIX A: QUESTIONNAIRE</b> .....	18



## LIST OF ABBREVIATIONS

<b>SPSS</b>	<b>Statistical Package For Social Sciences</b>
<b>UGX</b>	<b>Uganda Shillings</b>
<b>N</b>	<b>Number Of Respondents</b>
<b>NAADS</b>	<b>National Agriculture Advisory Services</b>
<b>Kg</b>	<b>Kilogram</b>
<b>Ha</b>	<b>Hectare</b>
<b>GDP</b>	<b>Gross Domestic Product</b>
<b>GM</b>	<b>Gross Margin</b>
<b>%</b>	<b>Percentage</b>
<b>TVC</b>	<b>Total Variable Cost</b>
<b>TR</b>	<b>Total Revenue</b>
<b>Var</b>	<b>Variables</b>
<b>Yrs</b>	<b>Years</b>
<b>MAAIF</b>	<b>Ministry Of Agriculture, Animal Industry And Fisheries</b>
<b>FAO</b>	<b>Food And Agriculture Organisation</b>

## LIST OF FIGURES

<b>Figure 1: CONCEPTUAL FRAMEWORK</b> .....	7
<b>Figure 2: Showing education level of respondents</b> .....	10

## LIST OF TABLES

Table 1: Socio-Demographic features of the farmers .....	11
Table 2: perceived benefits derived from maize production .....	12
Table 3: cost of maize production.....	13
<b>Table 4: gross margin estimates for maize production per hectare.....</b>	<b>14</b>

## CHAPTER ONE: INTRODUCTION

### 1.1 Background

Maize (*Zea mays*), also called corn, is believed to have originated in central Mexico some 7,000 years ago from wild grass, and native Americans transformed it into a better source of food (Caballero-garcía et al., 2019). Maize contains approximately 70-87% (carbohydrates) starch, 6-13% protein, 4% fat, 2-6% oil (Galani et al., 2022). It is grown throughout the world, with the United States of America (USA), China, and Brazil being the top three maize producing countries in the world (Arendt & Zannini, 2013). It is estimated that in 2021, the total world production of maize was 1.2 billion tons, with 384 million metric tons grown in the United States alone (Nyirenda et al., 2021). In sub-Saharan Africa, maize is the most widely grown crop and is a staple food for an estimated 50% of the population. South Africa, Nigeria and Ethiopia are the leading maize producing countries in Africa, with a combined production of nearly 32 MMT in 2019, which represents 39% of Africa's maize production (Pwc, 2021). Africa accounted for 7% of the global maize production in 2019 with 84.2 million tons produced (Pwc, 2021). Maize is a major crop in Eastern and Southern Africa (Macauley, 2015). In Uganda, maize is the most important crop grown and consumed throughout the country. Other important food crops in Uganda include banana, cassava, millet, sorghum, rice, sweet potatoes, Irish potatoes, beans, groundnuts, soybeans, and sim sim (sesame). Maize as a major staple food crop in the country plays a crucial role in ensuring food security and nutrition as well as a major source of income for the smallholder and commercial farmer (Macauley, 2015). In 2020, maize production for Uganda was 2,750 thousand tonnes. Before maize production of Uganda started to increase to reach a level of 2,750 thousand tonnes in 2020, it went through a trough reaching a low of 286 thousand tonnes in 1980 (MAAIF, 2020).

Maize is grown in most parts of Uganda but most intensely in eastern, the crop is the number one source of income for most small scale farmers who constitutes the bulk 80% of the rural poor also accounts for the largest share of maize production (FAO, 2012). Maize yield was at the level of 2 tones per ha in 2020, down from 3 tones per ha previous years, this is a change of 33.33% (Epule et al., 2021). The domestic market for maize is estimated at 350,000 – 400,000

## References

- Arendt, E. K., & Zannini, E. (2013). Maizes. In *Cereal Grains for the Food and Beverage Industries*. <https://doi.org/10.1533/9780857098924.67>
- Caballero-garcía, M. A., Córdova-téllez, L., & López-herrera, A. I. de J. (2019). Empirical validation of the multicentric theory on the origin and diversity of maize in Mexico. *Revista Fitotecnia Mexicana*, 42(4). <https://doi.org/10.35196/rfm.2019.4.357-366>
- Chune, M. D. (2022). Determinants of Maize Production Income in Western Uganda. *East African Journal of Agriculture and Biotechnology*, 5(1). <https://doi.org/10.37284/eajab.5.1.532>
- Das, V. K., & Ganesh-Kumar, A. (2017). Drivers of farmers' income: The role of farm size and diversification. *Indian Agricultural Markets and Policy*, 1(1).
- Epule, T. E., Dhiba, D., Etongo, D., Peng, C., & Lepage, L. (2021). Identifying maize yield and precipitation gaps in Uganda. *SN Applied Sciences*, 3(5). <https://doi.org/10.1007/s42452-021-04532-5>
- FAO. (2012). Analysis of incentives and disincentives for maize in Uganda. *Monitoring African Food and Agricultural Policies, December*.
- Galani, Y. J. H., Orfila, C., & Gong, Y. Y. (2022). A review of micronutrient deficiencies and analysis of maize contribution to nutrient requirements of women and children in Eastern and Southern Africa. In *Critical Reviews in Food Science and Nutrition* (Vol. 62, Issue 6). <https://doi.org/10.1080/10408398.2020.1844636>
- Gemechu Doti, A. (2018). Determinants of Dairy Value Chain Upgrading by Smallholder Farmers in Central Ethiopia. *World Journal of Dairy & Food Sciences*, 13(1).
- Lukwago, F. B., Mukisa, I. M., Atukwase, A., Kaaya, A. N., & Tumwebaze, S. (2019). Mycotoxins contamination in foods consumed in Uganda: A 12-year review (2006–18). In *Scientific African* (Vol. 3). <https://doi.org/10.1016/j.sciaf.2019.e00054>
- MAAIF. (2020). *The Republic of Uganda Ministry of Agriculture , Animal Industry and Fisheries, Draft Annual Report. 1–150*(October), 150.
- Macauley, H. (2015). Cereal Crops: Rice, Maize, Millet, Sorghum, Wheat. *Feeding Africa: An Action Plan for African Agricultural Transformation*.
- Mvodo Meyo, E. S., & Mbey Egoh, I. (2020). Assessing the Impacts of Variable Input Costs on Maize Production in Cameroon. *Agricultural Sciences*, 11(11).

<https://doi.org/10.4236/as.2020.1111071>

Nyirenda, H., Mwangomba, W., & Nyirenda, E. M. (2021). Delving into possible missing links for attainment of food security in Central Malawi: farmers' perceptions and long term dynamics in maize (*Zea mays* L.) production. *Heliyon*, 7(5).

<https://doi.org/10.1016/j.heliyon.2021.e07130>

Oduro-ofori, E., Aboagye Anokye, P., & Acquaye, N. E. A. (2014). Effects of Education on the Agricultural Productivity of Farmers in Offinso Municipality. *International Journal of Development Research*, 4(9).

Onasanya, O. A., & Obayelu, O. A. (2016). Determinants of Food Security Status of Maize-Based Farming Households in Southern Guinea Savannah Area of Oyo State, Nigeria. *Turkish Journal of Agriculture - Food Science and Technology*, 4(5).

<https://doi.org/10.24925/turjaf.v4i5.411-417.534>

Ouma, J., Bett, E., & Mbataru, P. (2014). Drivers of adoption of Improved Maize varieties in Moist Transitional zone of Eastern Kenya. *Journal of Economics and Sustainable Development*, 5(25).

Pwc. (2021). Positioning Nigeria as Africa's leader in maize production for AfCFTA. *Price Water House Coopers Nigeria, September*.

Sexsmith, K. (2021). Daily Labors: Marketing Identity and Bodies on a New York City Street Corner. *Contemporary Sociology: A Journal of Reviews*, 50(4).

<https://doi.org/10.1177/00943061211021084s>

UBOS. (2018). UBOS,2018. Uganda National Household Survey 2016/17. Kampala, Uganda;UBOS. 2018.

Waiswa, D. (2023). Spatial Price Transmission of Maize Grain Prices among Markets in Kenya, Tanzania, and Uganda: Evidence from the Nonlinear ARDL Model. *East African Scholars Journal of Economics, Business and Management*, 6(2).

<https://doi.org/10.36349/easjebm.2023.v06i02.001>

Zamrodah, Y., Shani, B. B., Ogunnigbo, C. O., Adetan, D. A., Morakinyo, T. A., Ahmadi, I., Godwin, R. J., Uni, B., Klappoth, B., Smolders, S., Ashrafi, S. R., Asonye, G. U., Asoegwu, S. N., Maduako, J. N., Madubuike, C. N., Kim, Y. Y., Kim, T., Kim, Y. Y., Lee, S., ... Deribe, Y. (2016). Status and Impact of Different Levels of Agricultural Mechanisation on the Smallholder System in Ethiopia. In *Soil and Tillage Research* (Vol. 97, Issue 2).