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**FACTORS INFLUENCING ADOPTION OF BIOGAS IN BUSOLWE SUB-COUNTY
BUTALEJA DISTRICT**



BY

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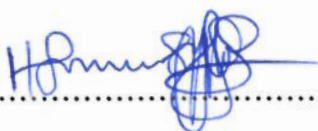
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**A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND
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FOR AWARD OF DEGREE OF BACHELOR OF ANIMAL PRODUCTION
AND MANAGEMENT OF BUSITEMA UNIVERSITY**

JUNE, 2016

DECLARATION

I HASAHYA PAUL declare that the information in this dissertation is my own work and is never been submitted to any institution of higher learning or university for any academic award.


Sign..........Date.....29th - AUGUST, 2016.....

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DEDICATION

I dedicate this report to all pioneers of Animal Production and Management course at the Faculty of Agriculture and Animal Sciences Busitema University, and to my sister Nawegulo Janet, my daughter Nawegulo Jordanah and our loved family that let this research be a point to guide us as we fight global warming which is increasingly becoming threat in our society.

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LIST OF ABBREVIATIONS

ACTS	:	African Centre for Technology Studies
ABPP	:	African Biogas Partnership Program
BSP	:	Biogas Support Program
EIA	:	Energy Information Administration
EPDC	:	Education Policy and Data Centre.
GHG	:	Green House Gases
IEA	:	International Energy Agency
IIED	:	International Institute of Environment and Development.
IISD	:	International Institute for Sustainable Development
ISIS	:	Institute for Science and International Security
IFAD	:	International Fund for Agricultural Development.
SDGs	:	Sustainable Development Goals.
NEP	:	National Energy Policy
NEPAD	:	New Partnerships for African Development
NGO	:	Non-Governmental Organizations
RETs	:	Renewable Energy Technologies
SSA	:	Sub-Saharan Africa
UN	:	United Nations
UNDP	:	United Nations Development Program

ABSTRACT

The study was carried out in Busolwe sub-county Butaleja District. The purpose of this study was to identify the underlying factors that influence adoption of biogas technology among dairy farmers. The sample size comprised of 120 dairy farmers who were purposively sampled. The findings from the study revealed that, the significant factors that influence adoption of biogas among dairy farmers were: household income, dairy farmer's head's highest level of education and the land. The underlying influences to the areas of significance were: poverty at household level, low level of education and early marriages among women who are the main implementers of the technology. The study recommends that the sub-County government of Busolwe should promote education, create awareness, create conducive environment for dairy farmersto access loans from financial institutions, encourage organizations charged with the promotion of biogas technology to offer subsidies to households, ensure improved provision of technical services in the area of biogas construction, extension service provider should encourage dairy farmers to pull resources together that will reduce the cost of construction of biogas digester.

CHAPTER ONE

INTRODUCTION

Back Ground

Biogas energy production and use has been illustrated to have the potential to reduce wood fuel consumption, mitigate against climate change and reduce indoor air pollution (Smith *et al.*, 2012). Biogas technology uses biological process to convert organic wastes into biogas (combustible mixture of methane and carbon dioxide) and high quality fertilizer. The technology is carbon neutral, and therefore does not add or remove carbon dioxide from the atmosphere. Potentially therefore, it is a significant and profitable way of mitigating global climate change.

An estimated 2.5 billion people in developing countries rely heavily on biomass, such as fuel wood, charcoal, agricultural waste and animal dung, to meet their energy needs for cooking. In Sub-Saharan Africa and in Asia excluding China and India, 93% of the rural populations depend on such resources. It is expected that one third of the world's population will still rely on these fuels until 2030 (IGAD, 2007). Continued over dependence on unsustainable wood fuel and other forms of biomass as primary sources of energy to meet household energy needs has contributed to negative impacts on the environment. In addition, continued use of traditional biomass fuels contributes to poor health among users due to incomplete combustion and smoke emissions in poorly ventilated houses common in rural areas (Biogas for Better Life, An Africa Initiative, 2007). Recent report on World Energy Outlook by the International Energy Agency (IEA) clearly stated that "current global trends in energy supply and consumption are patently unsustainable" (IEA, 2008).

To meet these challenges, reducing dependence on oil and biomass has become one of the priority issues for most countries around the world. So far, biofuels such as biogas are the most rapidly expanding and widely used types of renewable household fuel, although they still accounted for only 1.5% of total global household fuel demand in 2006 (IEA, 2008).

In Uganda, wood fuel accounts for 68% of the total primary energy consumption and is much higher in the rural areas where it is estimated to be 80% (UNEP, 2006). This scenario explains the reason behind Uganda's low forest cover of 1.7% Masinde and Karanja, (2011) against the World's recommendation of 10%. According to Tafdrup (1995), biogas systems can yield a

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