BUSITEMA UNIVERSITY
Pursuing Excellence

KNOWLEDGE AND PRACTICE OF BIOSECURITY IN INTENSIVE POULTRY FARMS IN NAMUTUMBA DISTRICT

BY

KASANGO EMMANUEL

BU/UG/2012/42

kasangoemmanuel@gmail.com

A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND ANIMAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELORS OF ANIMAL PRODUCTION AND MANGEMENT OF BUSITEMA UNIVERSITY

MAY, 2015

DECLARATION

I **KASANGO EMMANUEL** hereby declare that this dissertation is out of my original concept and has never been submitted to any University or institute of higher learning for any academic award.

Signature..... Date 30th/08/2015.....

APPROVAL

This dissertation has been submitted after the approval of my Supervisor:

Dr. Mawadri Patrick

Signature..... Date 02/09/2015

Dr. Walusimbi Emmanuel

Signature..... Date 03/09/015

Department of Animal Production and Management

Faculty of Agriculture and Animal Sciences

Busitema University

Signature..... Date .....

DEDICATION

I dedicate this dissertation to my parents Mr. KASANGO PATRICK and Ms. KAGOYA BEATRICE

ACKNOWLEDGEMENT

I take this opportunity to utter my gratitude to the Almighty God for the gift of life all through.

Sincere appreciation goes to my parents and entire family for the love and support they have rendered me hence breeding this piece of work

I also acknowledge the worthy efforts by Dr. Mawadri Patriek which drove me to eventual completion of this report. I also extend my acknowledgements to my beloved lecturers for the knowledge rendered; all my friends and colleagues who were always there for me in case of any help.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

NAADS- National agriculture advisory services

UBOS- Uganda bureau of standards

ILO- international labour organization

FAO- Food and agriculture organization

MAAIF- Ministry of agriculture animal industry and fisheries

MDGs- millennium development goals

ABSTRACT

Commercial poultry production is low in Namutumba district and Uganda at large even after the plan to modernise agriculture. The low level of intensive poultry production has persisted long after even government intervene to encourage farmers adopt commercial methods of production. A study was conducted to assess farmer's knowledge and practice of biosecurity in commercial poultry farms Namutumba district. Data was collected using questionnaires and 65 poultry farmers under commercial production were sampled. The collected data was coded and analyzed using the statistical package of social sciences (SPSS Version 16) and was presented by description, then by statistical figures, pie charts and graph. The study revealed that in conceptual biosecurity 69.2% of the respondents separated poultry house from the road of which 12.3% had knowledge, 72.3% separated poultry house from market places of which 44.6% had knowledge, only 33.8% separated poultry houses from nearest farm of which 30.8% had knowledge while 30.8% separated from bush/trees/water source and none of them had knowledge. Under structural biosecurity, 72.3% did not separate poultry houses from family dwellings, 84.6% separated poultry houses from offices, 61.5% did not separate their stores from poultry houses, and 92.3% separated their poultry house from parking yards. Also The study revealed that 86.2% of the respondents did not have a perimeter fence, 89.2% had no gate on their farms, 72.3% did not have footbath and few who had footbath had knowledge, 67.7% had the isolation unit for the sick birds and all of them had knowledge, 67.7% had separation units for separate age and only 3.1% had knowledge, 95.4% had disposal unit separated and 78.5% had knowledge. The study revealed that 13.9%, 66.2%, 66.2% of the respondents who separated the dwelling, offices, stores, parking yard respectively from the poultry unit to prevent diseases. 4.6 % and 3.1% had fence and gates respectively to prevent diseases. Under operational biosecurity, 52.3% kept other birds at home, 95.4% use family labour, all hired labour had birds at their home, 75.4% had no controlled movement in farm, 63.1% did not treat water, 87.7% disinfect equipments after every use, 80% receive visitors and 63.1% did not disinfect them, 92.3% vaccinated their birds and 93.9% control flock interaction. The findings of this study showed that the low level of commercial poultry production Namutumba might be due to the impacts of diseases resulting from poor biosecurity measures undertaken by the farmers. It is recommended that government and NGO should train poultry farmers on biosecurity, disease prevention and the adoption of modern husbandry practices suitable for the smallholder poultry production.

CHAPTER ONE

INTRODUCTION

1.1 Background

The structural changes that poultry sector has under gone through for the past two decades was due to the introduction of modern intensive production methods, genetic improvements, improved preventive disease control and biosecurity measures, increasing income and human population, and urbanization. These changes provide opportunities for poultry farmers, particularly those on small scale, to improve their farm income (Narrod *et al.*, 2008).

Intensive poultry production involves the total confinement of birds in one place where they are provided with necessary requirements and it is the most practiced method in developed countries. Intensive poultry farming is preferred because it results in High yield, Farmers can easily monitor their enterprise, Farming is more economical due to the smaller spaces needed, Ability to meet the ever-increasing demand for food supplies.

The poultry industry is one of the most important animal production industries and contributes to approximately 10% of all meat and eggs produced in the world each year and the s sector is particularly important in that it is a significant source for the supply of protein in household's nutritional intake, It is an attractive economic activity especially to women and poor population(Delgado *et al.*, 2008).

Despite the tremendous expansion of the commercial poultry sector since the 90s, scavenging poultry still account for more than 90% of the total poultry production in Uganda.

(Mukiibi & Kirunda, 2005). The low output from commercial poultry sector has been attributed to the rising cost of feeds, veterinary services and the continuous threats of infectious diseases severely affects the production.

Biosecurity is set of preventive measures designed to reduce the risk of transmission of infectious diseases, quarantined pests, invasive alien species, and living modified organisms (Aila *et al.*, 2011a; 2011b).

For commercially-raised birds, failing to implement bio security can be considerably more expensive than the cost of the bio security actions that could have protected the flocks from infectious disease (Cardona, 2008).Therefore the need to observe bio security in intensive poultry production so as to keep highly contagious diseases out of the poultry farm, However,

REFERENCES

Abdu PA (2007). Manual of Important Poultry Diseases in Nigeria (2nd edition). MacChin Multimedia Designers, Samaru-Zaria. Pp 1 – 100.

Aberra, M. and Tegene, N. (2007). Study on the characterization of local chicken in Southern Ethiopia. Proceedings held in Awassa, March 16-17

AboulElla, S.S. (1992). Women of the developing countries and their role in poultry

Aila, F.O., Mumbo, H., and Onyango, J.P. (2011a). Market operations of village chicken in Kenya. Book of Abstracts, 8th TICH Annual Scientific Conference, Great Lakes University of Kisumu, 29th April - 2nd May 2011.

Aini, I. (2000). Biosecurity in family flocks. Proceedings 21st World's Poultry Congress, Montréal, Canada, CD-ROM

Ajibefun, I. A., & Aderinola, E. (2004). Determinants of Technical Efficiency and Policy Implications in Traditional Agricultural Production. In Biannual Research Workshop of the African Economic Research Consortium (AERC), Nairobi, Kenya (pp. 2-4).

Al.Saffer.A *et al* (2006) principles of poultry bioseurity programme,chp, page, edtn, Kuwait Institute for scientific research.

Amass, S.F., and Clark, K.L. (1999). Bio security considerations for pork production units. *Swine Health Prod.* 7(5) pp.217-228.

Ameji et al. (2012) sokoto journal of veterinary science, 10(2), 26-31

Branckaert, RDS and Gueye, E.F.(2000). FAO's Programme for support to family Commercial Chicken Meat and Egg production. Fifth edition. Edited by Donald D. Bell and William D. Weaver. Kluwer Academic Publishers, P.O. Box 322, 3300 AH Donrdrecht, The Nethelands

Byarugaba, D. 2007. The Structure and Importance of the Commercial and Village based Poultry Systems in Uganda. FAO - Consultancy Report

Byarugaba, D. K., Olsen J. E. & Katunguka-Rwakishaya, E. 2002. Production.

Cardona C. J, Douglas Kuney, (2001). Bio security on Chicken Farms. Pages:543-556. (CARDONA, C.J. (2008) Farm and Regional Bio security Practices, in: SWAYNE, D.E. (Eds) Avian Influenza, pp.353-368 (Ames, IA, Blackwell Publishing Professional)

Cardona, C. J. (2008). Farm and regional bio security practices. *Avian Influenza*, 353-367.

Dekker, H. R. Aspeslagh en B. Winkel (1997). Burenverdriet. Attituden ten aanzien van de lidstaten van de Europese Unie.

FAO/INFPD Electronic Conference on Family Poultry 2002 on Bangladesh Model.

Gueye, E.F. 2000. Approaches to family poultry development. Proceeding of the 21st World's poultry congress. Montreal Canada. http://dx.doi.org/10.4314/sokjvs.v10i2.6

Kenya National Poultry Improvement Programme (KNPIP) (2010). Kenya National Poultry Improvement Programme. Retrieved from www.Kenya Poultry.org

MAAIF (Ministry of Agriculture Animal Industry and Fisheries) 1998 A Publications on the Plan for Modernisation of Agriculture, Animal Industries and Fisheries, Entebbe Management and Marketing Dynamics of the Rural Scavenging Poultry in Uganda. Second

Muteia, I, H., Oparinde, A. and Maina, G. (2011). A descriptive analysis of the impact of avian influenza outbreaks on the livelihoods of poultry farmers in Nigeria. African Journal of Agricultural Research Vol. 6(20), pp. 4680-4692, 26

Mwanza, R. N. (2009). An assessment of good hygienic practices in the small holder broiler meat chain in Nairobi and Thika that impact on food safety. A research project submitted to

Narrod, C., Tiongco, M., & Costales, A. (2008). Global Poultry Sector Trends and External Drivers for Structural Change. FAO proceedings on "Poultry in the 21st Century," http://www. fao. org/AG/againfo/home/events/bangkok2007/docs/part1/1_1. pdf.

Nyaga, P. (2007). The structure, marketing and importance of the commercial and village poultry industry: an analysis of the poultry sector in Kenya. Rome, Food and Agriculture Organization (FAO) of the United Nations

Okot M W 1990 A co-operative Approaches to smallholder Rural Poultry Production in Uganda. In: Smallholder Rural Poultry Production. Proceedings of a CTA Seminar. Thessaloniki, Greece, October, 9-13, pp. 249-253

Permin, A. and Detmer, A. (2007). Improvement of management and biosecurity practices in smallholder producers. Rome: Food and Agricultural Organization of the United Nations

Pica-Caimarra, U. and Otte, J. (2009). Poultry, food security and poverty in India: looking beyond the farm-gate. Pro-Poor Livestock Initiative Research Report No. 09-02.poultry systems in Uganda. Kampala, FAO. (Consultancy report) poultry production. http://www.husdry.kvl.dk/htm/tune99/24.branckaert.thm.

Shane, D. Halvorson, D. Hill, P. Villegas, and D. Wages 1995. Bio security in Sharma B (2010) Journal of agriculture and environment

Sonaiya, E.B. 1990a. The context and prospects for development of smallholder rural poultry production in Africa. in proceedings, CTA seminar on smallholder rural poultry production, Thessaloniki, Greece, 9–13 October 1990, Vol. 1, p. 35–52.

Ssewanyana, E., Oluka, J., & Masaba, J. 2003a. Performance Evaluation of Crossbred the poultry industry.., Am. Assoc. Avian Path., Kennett Square, PA.