



**CONSTRAINTS TO INDIGENOUS CHICKEN PRODUCTION AND MARKETING
IN MUKURA SUBCOUNTY, NGORA DISTRICT**

OMODING RICHARD

BU/UP/2012/309

omodingrichard1@gmail.com




**A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND
ANIMAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
A WARD OF THE DEGREE OF BACHELOR OF ANIMAL PRODUCTION AND
MANAGEMENT OF BUSITEMA UNIVERSITY**

JUNE, 2015


DECLARATION

I **Omoding Richard** hereby declare that this piece of work is my original work and has never been presented for any academic award in this or any other university or institution of higher learning.

Signed  Date 14th/07/2015

APPROVAL

This research dissertation has been submitted for examination with the approval of the supervisor.

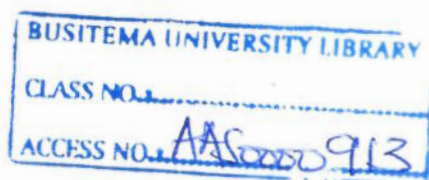
Sign  Date 14th/07/2015

Ms. AKULLO JOLLY

MSC FST (Cand), BAPTM, DAH

Department of Animal Production and Management

Faculty of Agriculture and Animal Sciences



DEDICATION

I dedicate this piece of work to the almighty God, my parents, brothers, sisters, my lecturers and friends for their support that has made it possible for this piece of work to be successfully written.

ACKNOWLEDGEMENT

My sincere special thanks go to Ms. Akullo Jolly my research supervisor, under whose supervision I found it possible to complete the research project and was able to compose this report.

I am also greatly indebted to the teaching staff of Busitema University, Faculty of Agriculture and Animal Sciences, most especially Dr. Matovu Henry and Mr. Mbogua Joseph, for their over whelming lectures on research methods and statistics respectively.

I am very thankful to my friends who helped me in one way or the other. I too thank my family members most especially my wife, Dad Emaru Michael and My Brother Ochom Timothy, for giving me support and all that time to concentrate in the field and on this report. May the almighty God bless you All.

TABLE OF CONTENTS

DECLARATION	i
EDICATION	iii
ACKNOWLEDGEMENT	iii
LIST OF TABLES	viv
LIST OF FIGURES.....	vii
LIST OF ABBREVIATIONS AND ACRONYMS.....	viii
ABSTRACT	ix
CHAPTER ONE.....	1
1.0 INTRODUCTION.....	1
1.1 Background	1
1.2 Problem statement.....	2
1.3 General objectives.....	2
1.4 Specific objectives.....	2
1.5 Research questions.....	2
1.6 Significance.....	3
1.7 Justification	3
1.8 Scope.....	3
CHAPTER TWO.....	4
2.0 LITERATURE REVIEW	4
2.1 Genetic diversity and distribution of Indigenous chickens	4
2.2 Importance and use of indigenous chickens in Uganda	4
2.3 Population size and regional distribution	4
2.4 Characterization of indigenous chicken	5
2.5 Chicken production systems in Uganda.....	5
2.5.1 Free Range System.....	5
2.5.2 Semi-Intensive System.....	6
2.5.3 Intensive System	6
2.6 Constraints to chicken production.....	7
2.6.1 Production constraints.....	7
2.6.1 Housing management.....	7

2.6.1.2 Feeding management	7
2.6.1.3 Health management.....	7
1.6.2 Socio -economic constraints	8
1.6.2.1 Marketing.....	8
CHAPTER THREE.....	9
3.0 MATERIALS AND METHODS	9
3.1 Study area.....	9
3.2 Study design.....	9
3.3 Sampling design.....	10
3.4 Operational design	10
3.5 Observational design.....	10
3.6 Statistical Design.....	10
3.7 Data Presentation	10
3.8 Ethical Consideration.....	11
3.9 Environmental Consideration.....	11
3.10 Limitations	11
CHAPTER FOUR.....	12
4.0 PRESENTATION OF RESULTS	12
4.1 Socio-economic characteristics.....	12
4.3 Feeding and watering system	14
4.4 Health and disease control	15
4.5 Extension contact and services.....	16
4.6 Factors limiting the production of local chicken.....	17
4.7 Chicken Marketing.....	18
4.8 Constraints to Chicken Marketing	19
CHAPTER FIVE.....	21
5.0 DISCUSSION OF RESULTS.....	21
CHAPTER SIX.....	24
6.0. CONCLUSION AND RECOMMENDATIONS.....	24
6.1 Conclusion	24
6.2 Recommendations.....	24
APPENDICES	30

LIST OF TABLES

Table: 4. 1. Sex, Age and Marital status of the respondents in Mukura Sub County	12
Table: 4.2.Education level and Occupation of the respondents in Mukura Sub County.....	13
Table: 4.3.Flock size, experience and chicken production system of respondents	13

LIST OF FIGURES

Figure: 4.1. Forms of housing used for chicken production in Mukura Sub County.....	14
Figure: 4.2. Feed supplements given to chicken in Mukura Sub County	15
Figure: 4.3. Types of Medicines used by the respondents to treat chicken against diseases	16
Figure:4.4. Frequency of respondents' contact with extension agents	17
Figure:4.5. Constraints encountered by the respondents in chicken production in Mukura Sub County	18
Figure: 4.6. Showing the buyers of chicken in the markets	19
Figure:4.7. Constraints to marketing of indigenous chicken in Mukura Sub County	20

LIST OF ABBREVIATIONS AND ACRONYMS

LC	Local council
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
NAGRIC & DB	National Agricultural Genetic Resources Centre and Data Bank
NARO	National Agricultural Research Organization
NCD	Newcastle Disease
NGOS	Non Government Organizations
PMA	Plan for Modernization of Agriculture
UBOS	Uganda Bureau of Statistics

ABSTRACT

The research was carried out in Mukura Sub-county to assess the constraints to indigenous chicken production and marketing. A total of 100 households rearing local chickens in study area were randomly selected. The results obtained found out that 56% of the respondents were females while the rest males; they were mostly in the age bracket of 21-35 years (56%). Free range (scavenging) system (88%) dominated the production systems; majority of farmers (45%) housed local chicken in separately (in chicken houses). Most farmers left chicken to scavenge for feeds (96%). Disease outbreak (93%) and lack of access to extension services (35%) were common in the area. The farmers sold chicken mostly to middlemen (53%). Chicken diseases (44%) were the major factor limiting the production of local chicken followed by predation (24%), parasites (12%), theft (10%), shortage of feeds (6%) and unreliable information (4%). The marketing of chicken was also affected by low chicken market prices (47%), high cost of transport (28%), low market access (13%), seasonal demand (7%) and lastly low finance and market awareness (5%). The productivity of scavenging birds in Mukura Sub County can be enhanced by providing and implementing appropriate vaccination program to reduce disease outbreak, improving on the housing strategies to reduce on chicken predation, providing technical support to farmers on supplementary feeding and watering. The study suggests that formation of cooperative societies in the area could be a solution to the challenges in the marketing of local chicken.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

The poultry sector in Uganda comprises of a number of different types of birds including chicken, turkeys, ducks, geese, ostriches and pigeons. Chicken are however the type with the most important economic significance and impact for household livelihoods (Mugarura et al 2013). The poultry industry in Uganda is composed of 21.8 million birds and estimated to consist mainly of chicken comprising of 10 million birds. Over 90% of Ugandan chickens are indigenous stock reared under the free range system, producing an average of 50 eggs per hen per year (Kyarisime et al., 2004).

However, rural poultry does not rate highly in the mainstream national economies because of the lack of measurable indicators of its contribution to macroeconomic indices as Gross Domestic Product (GDP). Economic evaluation of livestock at household and national levels is complicated by the multiple functions of livestock in the economy. Moreover, estimating the value of rural poultry is even more difficult than for other livestock because of the lack of reliable data (Mapiye et al., 2008).

The indigenous flocks consist of unimproved local chickens, typically 5-20 birds per family. The village flocks consist of unimproved local chickens, typically 5-20 birds per family (Kyarisime et al., 2004). The estimated world poultry population is about 16.2 billion, with 71.6 % in developing countries, producing 67, 718,544 metric tons of chicken meat and 57,861,747 metric tons of hen eggs (Ndutha. 2015). The poultry industry in the country is currently composed of almost 40 million birds according to Kirembe et al. (2012), majority (87.7%) of which, are indigenous chickens. The Eastern Region has the highest share of nearly 7.4 million birds (37.3%) (Shinyekwa et al., 2007). Poultry had the largest population constituting 54% of the livestock population (286,230) meaning that almost every household keeps poultry (National Livestock Report, 2008).

REFERENCES

- Alabi, O. J., Ng'ambi, J. W., Norris, D., & Egena, S. S. A. (2012). Comparative study of three indigenous chicken breeds of South Africa: body weight and linear body measurements. *Agricultural Journal*, 7(3), 220-225.
- Alders, R. G., & Pym, R. A. E. (2009). Village poultry: still important to millions, eight thousand years after domestication. *World's Poultry Science Journal*, 65(02), 181-190.
- Benson, T., & Mugarura, S. (2013). Livestock development planning in Uganda: Identification of areas of opportunity and challenge. *Land use policy*, 35, 131-139.
- Cuc, N. T. K., Muchadeyi, F. C., Baulain, U., Eding, H., Weigend, S., & Wollny, C. B. A. (2006). An assessment of genetic diversity of Vietnamese H'mong chickens. *International Journal of Poultry Science*, 5(10), 912-920.
- Dessie, T., & Ogle, B. (2001). Village poultry production systems in the central highlands of Ethiopia. *Tropical Animal health and production*, 33(6), 521-537.
- Dorji, N., & Gyeltshen, T. (2012). Characterization of family poultry production in Haa and Mongar districts of Bhutan. *Livestock Research for Rural Dev*, 24, 155.
- Fasina, F. O., Wai, M. D., Mohammed, S. N., & Onyekonwu, O. N. (2007). Contribution of poultry production to household income: a case of Jos South Local Government in Nigeria. *Family Poultry*, 17(1&2), 30-34.
- Gentle, M. J. (1971). Taste and its importance to the domestic chicken. *British poultry science*, 12(1), 77-86.
- Gondwe, T. N., & Wollny, C. B. A. (2007). Local chicken production system in Malawi: Household flock structure, dynamics, management and health. *Tropical animal health and production*, 39(2), 103-113.
- Gondwe, T. N. P. (2005). *Characterization of Local Chicken in Low Input-Low Output Production Systems: Is There Scope for Appropriate Production and Breeding Strategies in Malawi?* Cuvillier Verlag.
- Günaratne, S. P. (2013). Feeding and nutrition of scavenging village chickens. In *INFPDE-CONFERENCE* (p. 84).

Henning, J., Pym, R., Hla, T., Kyaw, N., & Meers, J. (2007). Village chicken production in Myanmar—purpose, magnitude and major constraints. *World's Poultry Science Journal*, 63(02), 308-322.

Justus, O., Owuor, G., & Bebe, B. O. (2013). Management practices and challenges in smallholder indigenous chicken production in Western Kenya. *Journal of Agriculture and Rural Development in the Tropics and Subtropics (JARTS)*, 114(1), 51-58.

Kitalyi, A. J. (1998). Village chicken production systems in rural Africa: household food security and gender issues (Vol. 142). Food & Agriculture Org..

Kugonza, D. R., Kirembe, G., Tomusange-Nvule, E., Lutalo, R., & Drani, E. (2012). Experimental validation of farmer innovations in incubation and brooding management of chickens. *Livestock Research for Rural Development*, 24, 91.

Kugonza, D. R., Kyarisiima, C. C., & Iisa, A. (2004). Indigenous chicken flocks of Eastern Uganda: I. Productivity, management and strategies for better performance.

Leta, S., & Endalew, B. (2010). Survey on Village Based Chicken Production and Utilization System in Mid Rift Valley of Oromia, Ethiopia. *Global Veterinaria*, 5(4), 198-203.

Mack, S., Hoffmann, D., & Otte, J. (2005). *The World's poultry science journal*, 61(01), 7-14. contribution of poultry to rural development.

Magothe, T. M., Okeno, T. O., Muhuyi, W. B., & Kahi, A. K. (2012). Indigenous chicken production in Kenya: I. Current status. *World's Poultry Science Journal*, 68(01), 119-132.

Magothe, T. M., Okeno, T. O., Muhuyi, W. B., & Kahi, A. K. (2012). Indigenous chicken production in Kenya: II. Prospects for research and development. *World's Poultry Science Journal*, 68(01), 133-144.

Maphosa, T., Kusina, J., Kusina, N. T., Makuza, S., & Sibanda, S. (2004). A monitoring study comparing production of village chickens between communal (Nharira) and small-scale commercial (Lancashire) farming areas in Zimbabwe. *Livestock Research for Rural Development*, 16(7), 2004.

Mapiye, C., Mwale, M., Mupangwa, J. F., Chimonyo, M., Foti, R., & Mutenje, M. J. (2008). A research review of village chicken production constraints and opportunities in Zimbabwe. *Asian Australas J Anim Sci*, 21(21), 1680-1688.

Mapiye, C., & Sibanda, S. (2005). Constraints and opportunities of village chicken production systems in the smallholder sector of Rushinga district of Zimbabwe. *Livestock Research for Rural Development*, 17(10), 1-7.

Mengesha, M., Tamir, B., & Dessie, T. (2011). Village chicken constraints and traditional management practices in Jamma District, South Wollo, Ethiopia. *Lives. Res. for Rural Dev.*, 23 (37).

Meseret, M., Solomon, D., & Tadello, D. (2011). Marketing system, socio economic role and intra household dynamics of indigenous chicken in Gomma Wereda, Jimma Zone, Ethiopia. *Livestock research for rural development*, 23(6).

Moges, F., Mellesse, A., & Dessie, T. (2010). Assessment of village chicken production system and evaluation of the productive and reproductive performance of local chicken ecotype in Bure district, North West Ethiopia.

Muchadeyi, F. C., Sibanda, S., Kusina, N. T., Kusina, J., & Makuza, S. (2004). The village chicken production system in Rushinga District of Zimbabwe. *Livestock Research for Rural Development*, 16(6), 2004.

Muchadeyi, F. C., Sibanda, S., Kusina, N. T., Kusina, J. F., & Makuza, S. M. (2005). Village chicken flock dynamics and the contribution of chickens to household livelihoods in a smallholder farming area in Zimbabwe. *Tropical animal health and production*, 37(4), 333-344.

Muchadeyi, F. C., Wollny, C. B. A., Eding, H., Weigend, S., Makuza, S. M., & Simianer, H. (2007). Variation in village chicken production systems among agro-ecological zones of Zimbabwe. *Tropical animal health and production*, 39(6), 453-461.

Muchadeyi, F. C., Wollny, C. B. A., Eding, H., Weigend, S., Makuza, S. M., & Simianer, H. (2007). Variation in village chicken production systems among agro-ecological zones of Zimbabwe. *Tropical animal health and production*, 39(6), 453-461.

- Natukunda, K., Kugonza, D. R., & Kyarisiima, C. C. (2011). Indigenous chickens of the Kamuli Plains in Uganda: II. Factors affecting their marketing and profitability. *Livestock Research for Rural Development*, 23(10).
- Nduthu, P. W. (2015). Social-economics influence on indigenous poultry production project in Kenya. A case of Machakos indigenous poultry.
- Ngeno, K., van der Waaij, E. H., Kahi, A. K., & van Arendonk, J. A. M. (2014). Morphological features of indigenous chicken ecotype populations of Kenya. *Animal Genetic Resources/Ressources génétiques animales/Recursos genéticos animales*, 55, 115-124.
- Njoroge, G. N., & Bussmann, R. W. (2006). Herbal usage and informant consensus in ethno veterinary management of cattle diseases among the Kikuyu (Central Kenya). *Journal of ethno pharmacology*, 108(3), 332-339.
- Okeno, T. O., Kahi, A. K., & Peters, K. J. (2012). Characterization of indigenous chicken production systems in Kenya. *Tropical animal health and production*, 44(3), 601-608.
- Perttula, L. (2010). Epidemiology and characterization of Newcastle disease in smallholder poultry in Mozambique.
- Shinyekwa, I., & Hickey, S. (2007). PRS review: Uganda case study. Chronic Poverty Research Centre Working Paper, (2008-09).
- Sserugga, J., & Pica-Ciamarra, U. (2010). Routine livestock data collection in Uganda.
- Ssewanyana, E., Ssali, A., Kasadha, T., Dhikusooka, M., Kasoma, P., Kalema, J. & Aziku, L. (2008). On-farm characterization of indigenous chickens in Uganda. *J. Anim. Plant Sci*, 1(2), 33-37.
- Mapiye, C., Mwale, M., Mupangwa, J. F., Chimonyo, M., Foti, R., & Mutenje, M. J. (2008). A research review of village chicken production constraints and opportunities in Zimbabwe. *Asian Australas J Anim Sci*, 21(21), 1680-1688.
- Yakubu, A. (2009). Indigenous chicken flocks of Nasarawa State, north central Nigeria: Their characteristics, husbandry and productivity. *Tropical and Subtropical Agro ecosystems*, 12(1), 69-76.

Okeno, T. O., Kahi, A. K., & Peters, K. J. (2011). Breed selection practices and traits of economic importance for indigenous chicken in Kenya. *Growth*,2(3.01), 1-44.

Guèye, E. F. (2000). The role of family poultry in poverty alleviation, food security and the promotion of gender equality in rural Africa. *Outlook on agriculture*, 29(2), 129-136.

Tadelle, D., Alemu, Y., & Peters, K. J. (2000). Indigenous chickens in Ethiopia: genetic potential and attempts at improvement. *World's Poultry Science Journal*, 56(01), 45-54.

Moges, F., Mellese, A., & Dessie, T. (2010). Assessment of village chicken production system and evaluation of the productive and reproductive performance of local chicken ecotype in Bure district, North West Ethiopia.

Mohammed, M. D., Abdalsalam, Y. I., Kheir, A. M., Jin-yu, W., & Hussein, M. H. (2005). Comparison of the egg characteristics of different Sudanese indigenous chicken types. *Int. J. Poul. Sci*, 4, 455-457.

Malago, J. J., & Baitilwake, M. A. (2009). Egg traits, fertility, hatchability and chick survivability of Rhode Island Red, local and crossbred chickens. *Tanzania Vet. J*, 26(1), 24-34.

Permin, A., Magwisha, H., Kassuku, A. A., Nansen, P., Bisgaard, M., Frandsen, F., & Gibbons, L. (1997). A cross-sectional study of helminths in rural scavenging poultry in Tanzania in relation to season and climate. *Journal of Helminthology*, 71(03), 233-24.

Thomson, I. S. I. (2010). AN Kaaya and D. Eboku. *Journal of Biological Sciences*, 10(8), 718-729.

