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## **Improving Livelihoods of the Urban Poor in Kampala City Through Kuroiler Chicken Production**

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### **ABSTRACT**

The Kuroiler, a dual purpose hybrid chicken bred in India for village production systems has a potential to contribute greatly to the poultry industry in Uganda because of its fast growth rates and higher egg production as compared to indigenous Uganda Chicken. The chicken was introduced in Uganda 2010. A lot of efforts in the country have focused on promoting this chicken in rural areas, however there are indications that the chicken can perform well in an urban setting as well. The trial was therefore conducted to investigate the performance of Kuroiler chicken in an urban setting in a production system where the chicken are confined and fed on market and kitchen waste instead of backyard scavenging as is the case in a rural setting. The trial involved 234 randomly selected farmers from the 5 administrative divisions of Kampala city. Each of the farmers received 20 chicks which were 3 weeks old. The study participants were monitored on a weekly basis and at the end of the 4 month period results obtained from a feedback questionnaire indicated that up to 71% of the farmers preferred the taste of Kuroiler birds compared to local ones. Up to 62% suggested that these birds were easier to rear than local & exotic birds fetching a higher income while 64% found Kuroiler chicken more resistant to diseases compared to local or exotic birds. However all farmers noted that the birds had a higher feed intake than other exotic birds. The results indicate that farmers with small production space as is the case in Kampala city, can rear Kuroiler chicken profitably in confinement; though one needs to have a reliable source of clean organic market waste and kitchen leftovers in order to keep the production costs low.

**Key Words:** Kuroiler Chicken, Kampala

## **INTRODUCTION**

Poultry rearing in Kampala is a fairly large endeavour comprising of an estimated 1,053,000 chicken (UBOS, 2008). Given the fact that poultry units can be operated in very small spaces, the enterprise has a potential of creating employment and improving incomes of households in the city. However most birds kept in the city are commercial hybrids (layers and broilers) which require expensive inputs and specialized housing for their maintenance and production. It is because of the high costs of production and maintenance that a large section of the community in the city that would otherwise be poultry farmers is locked out of the enterprise.

Kuroiler chicken could provide a solution to the above situation. Kuroiler are high performance backyard chicken bred by Keggfarms in India. According to the breeders, under scavenging conditions with minimal supplementation Kuroiler chicken can produce up to 150 eggs per laying cycle of 1 year and can attain a live weight of 2.25 Kg in 6 months, while males can attain a live weight of 3 Kg in 6 months. These results were confirmed during trial tests of the chicken in Uganda conducted by National Animal Genetic Resources Centre and Data Bank (NAGRC & DB) in 5 different Districts in Uganda (Sharma et al, 2015). The studies were, however, carried out in rural settings where chicken had abundant scavenging space. It is nevertheless believed that with modification in the management systems Kuroiler can also perform well in an urban setting if fed on kitchen and market waste which is abundant in the city with minimal commercial feed supplementation. The study was therefore conducted to investigate the potential of using an alternative feeding regime comprising of kitchen and market waste supplemented with by products from agro-processing to raise Kuroiler chicken in an urban setting.

## **MATERIALS AND METHODS**

### **The study area**

The study was conducted in Kampala City in each of the 5 administrative divisions namely, Lubaga, Nakawa, Kawempe, Central and Makindye. A total 234 urban farmers were selected by simple random purposive sampling considering a history of poultry rearing and membership in a community based organization registered in Kampala. Each of the farmers received 20 chicks which were 3 weeks old after they had been brooded and vaccinated against, New Castle Disease and Marek's Diseases. All participating farmers were encouraged to use kitchen and market waste as the primary source of chicken feed and minimal commercial poultry feed or agro by-products as a supplement.

### **Data collection**

The participants in the study were monitored on a weekly basis to provide technical support and assess progress. They were also given record keeping booklets to maintain data on production and health management. After the 4 month study period, a structured questionnaire was administered at a feedback workshop to get more information on performance, preference and maintenance of Kuroiler chicken from each production unit.

## Data analysis

234 interviews were conducted and responses were coded, frequency counts were calculated using Excel, 2013.

## RESULTS AND DISCUSSION

### Family Source of income

Majority of respondents (63%) had a family business as major source of income. The rest indicated major source of income as farming (21%) and formal employment (15%). It was however clear that all participants had an experience in poultry rearing.

### Meat Quality and ease of rearing

Farmers' assessment in relation to meat quality when compared to local birds are given in table 1 below, while assessment on ease of rearing is given in Figure 1

Trait	Assessment			
	Better	Worse	Same	Not sure
Taste	71%	2%	13%	14%
Meat to bone ration	More	Less	same	Not sure
	89%	2%	5%	5%
Nutritional value (amount of food)	More	Less	Same	Not sure
	92.8%	1.6%	1.4%	4.2%

Table 1: Assessment on meat quality

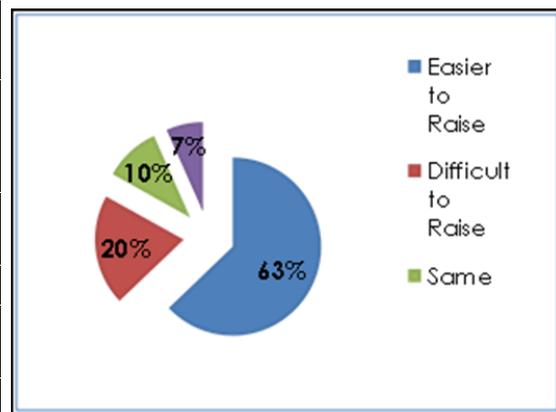


Figure 1: Assessment on ease of rearing

Most farmers found Kuroiler easier to rear on the account that they had high growth rates and they did not experience many ailments in the flock as compared to exotic birds. Some farmers however expressed concerns that Kuroiler chicken had very high feed requirements. This group of farmers was at times compelled to buy larger amounts of complete poultry feeds than recommended at the beginning of the trail.

### Live weight and Market price

All participating farmers confirmed that Kuroiler fetched a higher market price than local birds because of their large body sizes and resemblance to the indigenous birds . At 4 months the birds had attained an average of 2.5 Kgs live weight and were sold for 7 to 10 US \$ each. This figure is against a production cost of US \$ 3 per bird.

## Survival

At end of the trial and after taking stock of birds sold before end of the study, survival rate stood at 84%. This is much higher than 30% survival rate observed by Kugonza *et al*, 2008 in a similar study in indigenous chicken conducted in Eastern Uganda. This however does not necessarily mean that Kuroiler chicken have a higher survival rate than indigenous Uganda chicken. This high survival rate could be attributed to the fact that all chicken distributed to the farmers had been brooded for three weeks during which time they were ‘hardened’ and vaccinated against important diseases like New castle prior to conducting the trail.

## CONCLUSIONS

The study demonstrated that Kuroiler chicken meat is accepted by a number of households on account of its taste; texture; meat to bone ratio and resemblance to indigenous birds. It is also clear that Kuroiler chicken can be reared profitably on kitchen waste as a primary source of feed and hence can contribute to improving household incomes in the city. This could also recycle nutrients from organic wastes that would otherwise increase on disposal costs for the urban council administration. However one needs to have a reliable source of clean organic market waste and kitchen leftovers in order to keep the production costs low since Kuroilers have a high energy requirement with a high feed intake.

## ACKNOWLEDGMENT

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