The Contribution of Improved Chicken Strains in Promoting Women Empowerment in Bariadi and Muheza Districts, Tanzania

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Abstract

Increasing number of development projects espouse objectives of women's empowerment. However, mechanism by which agricultural development projects can enhance women empowerment is scantly documented. Therefore, this paper aimed at assessing the role of improved chicken strains in promoting women empowerment. The study which this paper is based on, involved 240 women (120 beneficiaries of African Chicken Genetic Gain [ACGG] and 120 non-beneficiaries) from Bariadi and Muheza districts. Cross-sectional research and mixed methods of data collection were used. Quantitative and qualitative data were collected using a structured questionnaire, Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs). Extent of women empowerment among beneficiaries and non-beneficiaries of ACGG project was measured using a Composite Empowerment Index (CEI). Content analysis was used to analyse qualitative data. Quantitative data were analysed by using descriptive statistics. Results showed that ACGG project provided women's access to initial stock of improved chicks and vaccines as well as extension and training services. Women who benefited from ACGG were more empowered (CEI = 0.714) as compared to non-beneficiaries (CEI = 0.529). Based on the findings, women empowerment has been realised through the intervention of the improved chicken which were sponsored by the ACGG project. However, the ACGG project focused more on creating an enabling environment for women's access to productive resources than on addressing social settings that influence women's status. It was thus recommended to the ACGG project, Local Government Authorities and development partners to scale up improved chicken interventions to other areas and promote initiatives to challenge social institutions that have an impact on women's life.

Keywords: Women empowerment, improved chicken strain, African Chicken Genetic Gain (ACGG) project and Composite Empowerment Index (CEI).

Introduction

Women make important contributions to agricultural and rural economies of all regions over the world. However, women face gender specific constraints that limit their productivity and contributions to agricultural production, economic growth and well being of their families and community at large (Doss, 2018; FAO, 2011). Most rural women are disadvantaged in access to productive resources and technical knowledge than men (Fox, 2018; FAO, 2011).

Currently, the recognition of the women constraints in agriculture sector necessitates the international development community in transforming the sector and enhancing women

inclusion (Fox, 2018). Major commitments aimed at revitalizing agriculture in developing countries emphasises on promoting women empowerment (Fox, 2018; Johnson *et al.,* 2017; FAO, 2011). Many agricultural development interventions specifically aim to empower women alongside goals to improve agricultural productivity and income (Malapit *et al.,* 2019). Therefore, many development organizations have incorporated the empowerment goal and integrated activities aimed at empowering women into the planning and implementation of their projects and programmes (Johnson *et al.,* 2017; Fox and Romero, 2017).

Despite these growing commitments to women empowerment among implementers of agricultural development projects, there has been little systematic work on mechanisms by which interventions can enhance women's empowerment (Tesfaye *et al.,* 2018; Johnson *et al.,* 2017). In order to unveil evidence to that, there is a need of examining agricultural development projects that aimed at both increasing productivity as well as women empowerment. Therefore, the study on which this paper is based examined the importance of African Chicken Genetic Gain (ACGG) project in promoting women empowerment in Bariadi and Muheza Districts, Tanzania. Specifically the study aimed at answering issues pertaining to how did ACGG project contribute to women empowerment and what were the women's perceived benefits as a result of ACGG project?

The African Chicken Genetic Gain (ACGG) project is a research for development partnership working in Tanzania, Ethiopia and Nigeria. The main objective of the ACGG project, among many others, is to improve the livelihood of disadvantaged rural farmers, particularly women, by introducing more productive and agro-ecologically adaptable chicken strains (Pius and Mbaga, 2018). In Tanzania, the project had been implemented in 20 districts located in five agro-ecological zones. The ACGG project adopted the value chain concept and innovation platforms as a means to allow actors including farmers to innovate and co-create solutions to a number of constraints facing the poultry industry (ACGG, 2015).

Materials and methods

The study was conducted in Bariadi and Muheza District Councils in Simiyu and Tanga Regions respectively. Bariadi and Muheza District Councils were among the areas that had benefited from the ACGG project. Other district councils that had benefited from ACGG project are: Masasi, Newala, Ruangwa, Lindi Rural, Mbeya Rural, Ileje, Njombe Rural, Wanging'ombe, Manyoni, Iramba, Bahi, Chamwino, Kilombero, Morogoro Rural, Korogwe, Maswa, Misungwi and Sengerema. Bariadi and Muheza Districts were purposefully selected as study areas due to the socio-cultural and socio-economic differences between them. While Bariadi is dominated by the agro-pastoral Sukuma ethnic in the hinterland, Muheza largely comprises diverse ethnic groups depending on agriculture and with more inclination to a coastal culture. In each district three villages were involved that is Mwamoto, Byuna and Ibulyu in Bariadi District and Kwaisaka, Kisiwani Nkumba and Mlingano villages in Muheza District.

The study applied a cross-sectional research design which allows data to be collected in multiple cases at single point in time. The design allows collection of both qualitative and quantitative data for two or more variables. The design is useful for description purposes as well as for determination of relationships between variables (Babbie, 1990).

The sampling unit comprised of women aged 18 years and above. The women were selected as respondents due to their active role in chicken keeping. Of the women involved in the study, 120 were beneficiaries of the ACGG whereas the remaining 120 were non-beneficiaries of the project. The sampling frames were lists of ACGG beneficiaries and non-beneficiaries from village registers. Simple random sampling technique using the lottery method was used to obtain a total of 240 respondents with equal proportion of both ACGG beneficiaries and non-beneficiaries. Simple random sampling using lottery method was used to select sample from the list of names selected from each village.

Mixed methods of data collection were employed whereby both qualitative and quantitative data were collected. The

combination is considered useful as it provides triangulation of information (Creswell, 2013). A structured questionnaire was used to collect quantitative data. Quantitative data were analysed by using descriptive statistics while Composite Empowerment Index (CEI) was used to measure extent of women empowerment among beneficiaries and non-beneficiaries of ACGG project. The composite empowerment index (CEI), denoted by Y in equation (1), was constructed by averaging four women empowerment indices, which are Household decision making index (HDMI), Domestic consultation index (DCI), Personal autonomy index (PAI) and Freedom of movement index (FMI).

$$Y=¼(HDMI+DCI+FMI+PAI)\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Qualitative data on women empowerment were collected from May to June, 2018 using Focus Group Discussions (FGDs) and key informant interviews. FGDs involved women and men keeping improved chickens. The Issues that were discussed in FGDs included the role of stakeholders in chicken production and how they contribute to chicken productivity and women empowerment. Eighteen FGDs were conducted in six villages. In each village three FGDs comprised men only, women only and both. The number of participants in each FGD ranged from 8 to 10 in line with advice by Barbour (2011) and Bryman (2004) for the reasons that if the FGD participants are too many some of them just sit idle without giving their opinions and that if they are too few they may not be able to discuss effectively difficult topics.

Key informant interviews were held with people who were believed to have in-depth understanding and knowledge on women empowerment in the context of chicken keeping. These included District Livestock and Fisheries Officer (DLFOs), District Community Development Officer (DCO), extension officers, brooders, and ACGG zone coordinators. The issues that were explored during key informant interviews included leaders' and individuals' views on women issues in the context of chicken production. Qualitative data were analysed using content analysis technique after organising the data into different themes that addressed the objectives.

Results and discussion

This section presents the findings on the role of the African Chicken Genetic Gain (ACGG) project and the respondent's opinion on the benefit of the improved chicken. The findings of the study showed that the ACGG project introduced genetically improved chicken breeds in the rural areas, with the aim of increasing smallholder chicken productivity and women empowerment. The ACGG project provided women with inputs (initial stock of chicks and vaccines), extension and training services as well as organization of local markets. The details on how ACGG intervention provided opportunities for chicken productivity and women empowerment are discussed below.

Provision of initial stock of chicks

During in-depth discussion with the Eastern Zonal coordinator of the ACGG project, it was revealed that each woman beneficiary was supported with 25 chicks of six weeks old. Women's access to productive resources is one of the conditions that contribute to women empowerment. Similar results have been reported by Meinzen-Dick *et al.* (2019) and Haghighat (2014) that access to productive resources is associated with women empowerment. Despite, the opportunity of women access to productive resources, realization of empowerment outcomes depends on their commitment in utilizing the resources.

Moreover, provision of resources depends on how the resources are organised, mobilised and managed. For example, the ACGG zone coordinators reported that caring for one day old chicks for six weeks was done by two brooders in both Bariadi and Muheza districts. One of the brooders from Muheza District had this to say: *"Brooding is a very sensitive activity which requires maximum care for the chicks particularly in feeding and vaccination. Once farmers received chicks from the brooders, they were required to do vaccination after every three months starting from the day they received from the brooder"* (Key informant, Mlingano village,

15.05.2018).

These findings show that caring for one day old chicks for six weeks was difficult for women in rural areas due to lack of facilities and inadequate skills on how to take care of the chicks. The results have been supported by Leroy *et al.* (2015) who asserted that chicks should be raised for about 2 to 4 weeks and vaccinated before being sold to the farmers to avoid juvenile mortality. Despite the provided support on care for the chicks by the brooder for six weeks, yet the extension officer reported that some farmers experienced chick mortality soon after receiving the chicks from the brooder due to mainly stress associated with long distance transportation. In some cases irregular vaccination and feeding was reported as the cause of chick mortality. Therefore, women benefits from the project intervention were somehow affected by irregular management practices of the keepers as they were not used to routine management practices of the improved chickens.

Improved access to extension services and trainings

The ACGG project played a significant role in provision of extension and training services. The access of extension services and training became more regular after the introduction of the ACGG project. The majority of the beneficiary participants in FGDs revealed that extension and training services had been improved after the onset of the ACGG project. The result implies that access to extension and training services increased productivity of chicken as well as improved women's access to income. However, the training package included mainly information related to management practices of improved chickens than women empowerment issues. Similar findings have been reported by Galiè and Kantor (2016) that projects aimed at empowering women pay more attention to the technical issues than to socio-cultural settings that influence women's status. Equally, Cornwall (2016) revealed that providing women with the means to generate income only cannot address the deep structural basis of gender inequality. Therefore, development projects aimed at empowering women should go beyond provision of enabling environment for accessing resources and opportunities for generating income. They should also focus on challenging the cultural norms and women's self-image that perpetuate gender inequalities.

Enhanced marketing of chicken and eggs

The findings revealed that selling of chickens and eggs was mainly organised at local markets which are not always reliable. Similar results have been reported by Thieme *et al.* (2014) that access to market is limited in rural areas. Despite the market constraints in rural areas, participants in FGDs at Ibulyu village at Bariadi District reported that the ACGG project enabled women to organize themselves into marketing groups. They established a meeting centre for collecting and selling eggs. One of the participants in the FGDs said:

"Improved chicken is among the potential sources of income for women. Every week I am sure to get at least Tsh. 6,000 from selling eggs" (Woman ACGG beneficiary, 25.05.2018)

The result implies that organization of women into marketing groups provided an assurance of the market and regular access to income. However, the price for selling eggs was low at farm gate (Tsh. 300 per egg) compared to Tsh. 500 in town centres. Therefore, strengthening of marketing groups could play a significant role in improving market access of chicken products and price in particular. Also, improved access to market could increase the sustainability of keeping improved chickens as it requires some costs related to feeds, vaccination and shelter.

The findings about respondent's opinions on the benefits of improved chicken reveals that a mean income of Tsh. 478 651 per household per year was obtained from selling eggs and chickens. One of the key informants reported that:

"the mean income was less than expected income (Tsh. 800 000 to 1 000 000) due to limited markets improper feeding and vaccination" (Extension Officer Muheza, 05.06.2018).

The result implies that women's access to income had improved as they reached at least half of the expected income. The income obtained from selling of cocks and eggs was

very useful to the household expenditure. The majority of women in FGDs reported that income earned from improved chickens was mainly spent at the household level.

While some women used the income derived from sale of cocks and eggs to renovate or build chickens' houses. To the contrary, various scholars such as FAO (2014) and Akite *et al.* (2018) reported that construction of the chicken's shelter is solely a men's role. The current study implies that access to income by women enabled them to make significant contribution in activities that are traditionally done by men.

Despite improved women's access to income, some men were concerned about women's financial status. The majority of male participants in FGDs at Mwamoto village reported that women's access to more income might lead to disrespect of their husbands, which implies that men might develop mechanisms to limit women's access to income. For example, in women FGDs, one of the women participants reported that "men reduced their income support when they realised increased women's access to income". To some extent this is a positive contribution to empowerment in that women can make decision on income use and possibly control. The result is in line with Santos *et al.* (2014) and Quisumbing *et al.* (2013) who revealed that women's projects may increase women's access to income, but did not necessarily increase women control of the overall income at the household level. Increased women's access to income may provide an opportunity for them to participate in decision making. However, the overall decision power to control resources at household level is men dominated and almost all household resources are men entitled. This indication necessitates the need to continue challenging the social settings that hinder women empowerment.

Moreover, results shows that improved chickens contributed to the food security at the household level. For instance, 35% of the ACGG beneficiaries had schedules for eating eggs as compared to 13% of the non-beneficiaries. The majority of ACGG beneficiaries at Kwaisaka reported that eggs were used for breakfast as well as for making lunch and dinner stews. Consumption of chicken meat was less common; the majority preferred to sell the chickens and use some of the money from the sales to buy beef and other household items.

According to the extension officer from Kwaisaka village, ACGG provided women with opportunities for increasing accessibility of eggs which in turn improved egg consumption at household level. Similar results have been reported by various scholars such as Bashir and Schilizzi (2013) and de Bruyn (2018) that, in the African context, input availability is one of the most important determinants of food availability at household level. Therefore, the ACGG project; through provision of initial chicks, extension and veterinary services has played a significant role in increasing availability of food.

Levels of women empowerment among ACGG beneficiaries and non-beneficiaries

The results for empowerment show that 46.7% of the ACGG beneficiaries and 5% of non-beneficiaries attained medium level of empowerment while 21.7% and 72.5% of the beneficiaries and non-beneficiaries respectively were classified into low levels of empowerment (Fig. 1). Higher level of empowerment for the beneficiaries was anticipated because ACGG provided women with access to productive resources through multi stakeholder collaborations. The results are in line with Meinzen-Dick *et al.* (2019) and Cornwall (2016) who reported that women's access to economic resources enables them to make changes

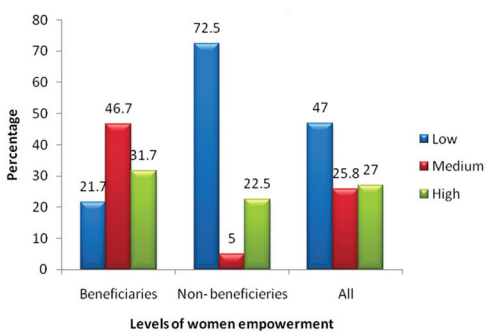

Figure 1: Distribution of women empowerment levels among ACGG beneficiaries and non-beneficiaries

towards empowerment. However, access to economic resources alone cannot lead to women empowerment; women's access to productive resources should go hand in hand with efforts to challenge social structures that subordinate the position of women.

Conclusions and recommendations

Improved chicken's interventions for women provide potential opportunities for improving their livelihoods, access to resources and control over benefits. The African Chicken Genetic Gain (ACGG) project provided empirical evidence on how women were empowered from the improved chicken's interventions.

It was thus recommended to the ACGG project, Local Government Authorities and development partners to scale up improved chicken interventions to other areas. Moreover, the (LGA) through the departments of extension, livestock and Community Development and other development partners should strengthen their services and integrate women empowerment objective in improving agricultural productivity and development projects. Training institutions and other development partners should create awareness on harmful cultural beliefs and norms that impede women empowerment efforts. This could be done through trainings, awareness raising, innovation platforms and lobbing and advocacy.

Acknowledgements

I thank the management of the Mwalimu Nyerere Memorial Academy, particularly Professor Shadrack S. Mwakalila, Prof. Richard Y.M. Kangalawe and Dr. Godwin E. Kaganda for granting me financial resources for some parts of the study as well as the study leave to pursue my PhD studies. My sincere appreciation goes to Prof. Joyce G. Lyimo-Macha and Prof. John N. Jeckoniah for supervising my study and for encouraging me throughout my studies. I acknowledge the ACGG-Tanzania Project leader Dr. Ezekiel Goromera and Co-PI Dr. Said Mbaga for granting me research funds. Special thanks go to Dr. Said Mbaga for constructive advice on how to develop manuscripts.

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