

Department of Animal Science

VILLAGE CHICKENS AND WOMEN'S ACCESS TO AGRICULTURAL EXTENSION SERVICES ACROSS AFRICA

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Women make important contributions to agricultural and rural economies in all regions of the world, but perhaps nowhere is this more critical than in sub-Saharan Africa. Women contribute about 60 to 80 percent of the labor force to the agricultural sector in Africa (Palacios-López et al., 2017). However, their efforts aren't fully recognized (Gebre et al., 2021), their importance and contributions are less acknowledged (Lemma et al., 2020), and they are often undervalued (Beevi et al., 2018). Women face gender specific constraints that limit their productivity and contribution to agricultural production, economic growth, and the well-being of their families and community (Doss, 2018). Most **rural women are more disadvantaged** in access to productive resources and technical knowledge than men (FAO, 2011). Many agricultural development interventions specifically aim to empower women alongside goals to improve agricultural productivity and income (Malapit et al., 2019). However, access to economic resources alone cannot lead to women's empowerment; women's access to productive resources, extension service programming and technical knowhow should go hand in hand with efforts to challenge the social structures that subordinate the position of women (Maunde et al., 2021).

Extension services access

Around the world, more than 815 million people suffer from hunger (World Bank, 2018). However, if women farmers had access to the same rights and privileges as their male counterparts and were empowered to contribute fully to the food security system, that number could be significantly reduced (FAO, 2011). Women make up almost half of the agricultural labor force in developing countries, yet they (and their production potential) are hindered by barriers to finance, inputs, extension services, technology, literacy, land ownership and rights (FAO, 2011). In addition, in many developing countries, agricultural extension service programs are focused on male farmers, leaving women outside the mainstream of information even when they are engaged in the very activities being covered (Leta et al., 2017). As a result, this **neglect of women by extension services** contributes to women's continued food and income insecurity

(Atsbeha and Gebre, 2021). If extension services are to be useful to women, they must consider the unique cultural, economic and social contexts of women. The gender of the facilitator will be an important part of this context because it is widely believed that women in sub-Saharan Africa prefer working or need to work with women extension agents (Diaz and Najjar, 2017) to overcome cultural barriers in communication between male extension agents and female farmers, which result in few visits to female farmers (Atsbeha and Gebre, 2021).

Globally, the activities of extension services are often of limited use for women, and women tend to have more limited access to these services. However, agricultural innovations, including extension services, can be extremely valuable for impoverished farmers, and they may be particularly useful to women because they can lessen the labor and time input of production agriculture (Anandajayasekaram et al., 2008). Despite the implementation of various innovations, **gender inequality remains a serious issue in agriculture**, in part because extension services historically have only targeted male clientele (Diaz and Najjar, 2019). However, the problem is compounded by other forms of gender-based inequity, such as limited access to education and land tenure systems which do not recognize or allow for women's ownership of land (Jefrey and Sulaiman, 2013).

Village chicken production

Indigenous (village) chickens (Figure 1) contribute socioeconomically to household food security across Africa. These **chickens are primarily reared by women** and are kept predominantly under scavenging systems where flock management conditions (feeding, housing, biosecurity and health care) are often poor. Production of village chickens faces many challenges. The poor productivity of the birds, a shortage and the poor quality of feeds consumed, frequent disease outbreaks, and inappropriate housing are the main constraints that have been reported across Africa (Mujyambere et al., 2022). In addition, the lack of improved chicks and genetic stock bred specifically for meat production is a serious constraint. Improvements in this area will require better breeding stock and improved poultry extension service programming similar to what is currently used for crop production. Poor infrastructure (transportation, energy, feed and water supply systems) is also a major barrier to increased poultry production, particularly in isolated, rural areas. Furthermore, chickens are often sold in live markets, which increases concerns over biosecurity and transmission of diseases such as the current avian influenza outbreak (Windhorst, 2022). Lack of credit for producers is another serious constraint. Most African countries lack a system to provide credit for poultry farmers to purchase chicks and feed and are unlikely to establish such a system in the near future. Therefore, while better genetics and a more intensive production system will be an option for some, **improvements in the small-scale village production system** offer greater potential for most smallholder farmers.

Small-scale village chicken production holds much potential for the alleviation of malnutrition and poverty in rural communities across much of Africa. However, the low productivity of most indigenous-type chickens limits the capacity of smallholder poultry production to deliver on its potential for addressing poverty and food security. Much of the low productivity associated with village chicken production is caused by a variety of infectious poultry diseases. Leading this list of diseases is Newcastle disease, which is a highly infectious viral disease, with virulent strains causing up to 100 percent mortality among infected flocks. In addition, common diseases such as coccidiosis, fowl pox and infectious bursal disease, and the less common but no less deadly

avian influenza, all cause high morbidity and mortality in village flocks across Africa. In the free-range, scavenging production system, disease control is extremely difficult to manage. To some degree, **biosecurity and good husbandry practices** such as isolating new birds, quarantining sick birds and regular cleaning/disinfecting of coops or pens can provide inexpensive and effective disease prevention measures. Unfortunately, most village poultry producers have never received training on biosecurity and best management practices. Therefore, a critical need exists to increase knowledge and awareness of these practices as well as awareness of appropriate vaccination practices and procedures. This is where a lack of extension agents, especially women extension agents, seriously hinders improvements to the village poultry production sector. **Greater attention must be focused** in this area if we are serious about addressing food insecurity in the region.

The Role of Women

Women play a significant role in poultry production and a large percentage of village poultry farmers are women. Poultry makes a substantial contribution to household food security and the well-being of children. In Tanzania, production of indigenous chickens represented 38 percent of the total income earned by household income-generating activities (Linuma and Peter, 2017), the highest source of any household income generator. However, women in poultry production operate under numerous constraints including a lack of education, lack of suitable technology, limited access to extension services, lack of land availability and limited access to credit and input (Hassan et al., 2012). Hassan et al. (2012) concluded that the literacy rate among rural women should be improved through formal and non-formal extension education services that ultimately would raise their prevailing socioeconomic conditions. Hassan et al. (2012) also noted that **rural women were in favor of female poultry extension services** and training in poultry production and management. As a result, it was recommended that governments should establish specific rural women training centers to enhance their level of knowledge in the poultry sector and **promote increased numbers of female extension officers** so that women farmers could more easily receive training and advisory services related to poultry production and management. Also recommended was the allocation of special seats to females in extension education departments at agricultural universities to increase the numbers of female extension agents going forward.

Regarding agriculture, women in Africa are estimated to produce up to 80 percent of the food supply (ILO, 2005). However, when it comes to agricultural inputs and services, the share going to women is considerably less: women receive less than 7 percent of the agricultural extension services, less than 10 percent of the credit offered to small-scale farmers, and own only 1 percent of the land (ILO, 2009). Therefore, women are often found concentrated in subsistence agriculture and unpaid farm work and excluded from more lucrative agriculture opportunities. Still, the FAO (2011) indicated that if women had the same access to productive resources as men, they could increase yields on their farms by 20 to 30 percent and raise total agricultural output in developing countries by 2.5 to 4 percent, thereby potentially reducing the number of hungry people in the world by 12 to 17 percent. Many agricultural development programs are on the ground across sub-Saharan Africa with the goal of increasing food production and improving the standards of living. Although women farmers are actively engaged in food production, processing and marketing, substantial social and economic constraints serve as barriers to their access to scientific and technological information. As a result, women in agriculture are not

adequately equipped with the technical knowledge to allow them to make the best use of farm inputs for optimum yield.

Where to from here?

Even though millions of women throughout the world contribute to national agricultural output and family food security, detailed studies from Latin America, South Asia and sub-Saharan Africa consistently indicate that rural women face greater constraints in accessing agricultural extension services than men of equivalent socioeconomic conditions (Onuekwusi and Chukwu, 2014). Much has been written about past failures of government extension services to reach women farmers and the cultural bias which has, in many countries, prevented women from active participation in group trainings, extension meetings and, most critically, access to inputs such as technology and credit (Haile, 2016). Haile (2016) recommended that 1) governments should encourage and assist women farmers by giving them access to needed farm inputs and incentives; 2) women have access to adult literacy education programs to help women farmers acquire basic skills and abilities to seek and receive agricultural information through extension agents, including extension leaflets, bulletins, newsletters, etc.; 3) women farmers have access to credit facilities provided by the government either through various women's groups or cooperatives as to enable them to participate fully in agricultural activities; and 4) agricultural information provided to farmers should be gender specific and sensitive.

Gender, agricultural extension and chickens

Food insecurity is a worldwide issue, but it is especially challenging throughout Africa. One of the reasons Africa has been so hard hit by food insecurity in recent years is the bleak state of the agricultural sector. Many of the challenges facing Africa's agricultural sector result from a few major causes, including poor political and economic governance, inadequate funding for agriculture, poor water resources management and neglect of research and development. However, another important reason for the failure of the agriculture sector has been gender inequality and a lack of empowerment of women, who are often managing the agriculture sector (ILO, 2009). Given the key role of women in the agriculture sector, improving their status would mean progress for the sector and the overall economy. The list of possible measures to improve women's status includes increasing women's status in decision-making; increasing access to farmland, fertilizers, education, and credit; and strengthening women's role within the family. These measures would not be costly to implement, however, 1) social protection systems are practically non-existent in rural areas in Africa, and if they do exist they often discriminate against women, 2) girls receive less education, especially in poor rural areas, 3) social norms play a much stronger role in rural areas, and again, often discriminate against women and girls, and 4) decision-making structures within families do not favor women, making it difficult for women to secure a better future for their daughters (ILO, 2009).

The **causes and effects of food insecurity are often not distributed evenly** across a region, community or even a household (Wilson, 2019). Women are slightly more impacted by food insecurity than men and, as rural areas are overwhelmingly affected by conflict and weather-related events, rural populations face higher rates of food insecurity (FAO et al., 2017). There is no easy answer to the complex issue of food insecurity. However, low-input agricultural products, such as village chicken production, practiced widely across much of Africa, offer vital contributions to household nutrition for resource-poor smallholder farmers. While women are

often the caretakers of these village poultry flocks, Wilson (2019) reported that there is often ambiguity on the level of access women have to these village flocks and that men often dominate livestock markets, making it uncommon, or even culturally inappropriate, for women to sell their poultry at the market. Therefore, limited by information and direct access to markets, women's negotiating power over their products is often weakened.

While the level of access women actually have in the decision making concerning village chickens may be ambiguous, the importance of village chickens as a tool for food security is crystal clear. Unfortunately, the prevalence of disease and lack of resources and knowledge results in low production capacity in the village chicken model. For village chicken production to improve the food security situation, producers need information and services from extension personnel to help maintain their flocks, understand vaccination protocols and enhance biosecurity practices. This information should include the possibility that getting bigger may not always be better. Getting bigger often means switching to improved genetics and increasing flock size which requires additional inputs, and this may not be ideal for many women farmers. There is **much value in the village chicken model**. The local clientele prefers the taste of village chickens over improved breeds and village chickens are hardier, more apt to survive a challenging climate, better foragers and have increased disease resistance compared to improved breeds. Improved breeds require access to additional feed and vaccines that are often difficult to find and better management overall, transforming poultry production into a more labor-intensive enterprise requiring increased time, skill, training and capital that many smallholder women farmers may not have.

Increasing the number of trained extension agents, **particularly women extension agents**, will be key to increasing women's knowledge of village poultry production and management. However, training more agents alone will not solve all the problems. These agents must receive ongoing support to deal with the challenges they face including poor infrastructure, limited resources, lack of funding, and lack of trainings in communication and gender relations to work with male and female farmers. An **increase in the number of women veterinary health officers** trained in disease recognition/management and vaccination procedures is also critical. A greater number of women in this role will increase the visibility of the work that women can do, provide role models for other women and young girls, and help shift cultural biases against women (Ragasa, 2014). Also, as more women enter extension agent roles with travel as an important part of their work requirement, distribution of resources will be critical. Wilson (2019) observed in Kenya that women less often received county-issued motorbikes than men, perhaps because cultural norms have typically deterred women from learning to drive.

Food insecurity across much of Africa is a serious issue and it will take everyone, women and men, to address the issue. Much of the potential women possess to address this issue through village poultry production goes untapped because of gender issues and social norms. Agricultural extension has an opportunity to address this issue on several fronts. The promotion of gender-responsive extension delivery opportunities, expanded access to women-friendly information, and increased training and advisory services should be given special attention in future extension service planning and programming agendas.

Figure 1. Village chickens.



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