

Can chickens empower women?

Perceptions from chicken producers in peri-urban and rural Ethiopia



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Perceptions from chicken producers in peri-urban and rural Ethiopia

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Abbreviations and acronyms

ACGG	African Chicken Genetic Gains
EIAR	Ethiopian Institute of Agricultural Research
FGD	focus group discussion
ILRI	International Livestock Research Institute
NGO	nongovernmental organization
SNNP	Southern Nations, Nationalities and People's Region

Introduction

The human population and urbanization are increasing and as a result, there will be a high demand for food. Poultry has an important role to play in increasing food security. Kryger et al. (2010) assert that 85% of the rural households in sub-Saharan Africa keep chickens or other types of poultry to supplement their main livelihood activities. Regardless of regional differences, the routine management of chickens is undertaken by women with assistance from children. Although men may assist in the construction of housing and in some localities, bringing birds and eggs to the market, women and children are the ones who feed and water the birds, clean the housing and provide treatment to ailing birds (Dessie et al. 2003; Mapiye and Sibanda 2005; Mutombo 2014).

It is universally known that family poultry is an entry point to address the problems of malnutrition, food insecurity and poverty for the rural poor (Nchinda et al. 2011). Women play major and significant roles in agricultural development, contributing to income, food and nutritional security for their households. Empowerment of women is important for them to contribute to meeting this demand and foster economic development. Guèye (2009) notes that the promotion of indigenous chicken production economically empowers women and rural youth. Empowerment refers to the process of enhancing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. The empowerment of rural women involves expanding women's assets and capabilities to participate in, negotiate with, influence, control and hold accountable the institutions that affect their lives (Narayan 2005).

The African Chicken Genetic Gains (ACGG) multi-country project is testing a potentially effective strategy to empower women through chicken production. ACGG is an Africa-wide collaboration initiated in 2014 to provide better chickens to smallholder farmers in Africa. The ACGG project tests and makes available high producing, farmer-preferred genotypes that increase smallholder chicken productivity in Africa. The project works in partnership with rural communities to test the productivity of improved breeds and empower them economically. One of the objectives of the project is to identify the chicken breeds/strains preferred by smallholder farmers in terms of bird colour, body conformation and temperament, egg and meat productivity, overall tropical adaptability under semi-scavenging production systems, and carcass and meat quality. The program aims to improve chicken genetics and the delivery of adapted chickens to support poverty reduction, productivity growth, increased household animal protein intake and the empowerment of women farmers in rural communities.¹

While gender equality and women's empowerment are major goals for the program, there is a limited understanding of what empowerment really means from the chicken producers' perspective, how it happens through chicken production and the preferred chicken traits that will empower women. The objectives of the study were to:

- i. Generate an understanding of how women and men in the rural and peri-urban settings define empowerment;
- ii. Develop a framework of how chickens empower women;
- iii. Determine whether there are any differences in chicken trait preferences by gender and across agro-ecologies;

¹ <https://www.ilri.org/research/projects/african-chicken-genetic-gains-acgg>

- iv. Determine how the tested chickens rank against the preferred traits; and
- v. Identify any changes in trait preference over time.

The results of this study will inform the breeding program and ensure that the breeds meet the preferences of producers and consumers across different agro-ecologies.

Methods

The qualitative study was conducted in 2018 in four regions of Ethiopia and two peri-urban districts of Addis Ababa (Table 1) using a step-by-step qualitative research guide (Mulema 2018). Separate focus group discussions (FGDs) were conducted with women and men in each selected village per district. The research team used different participatory tools to elicit discussions among women and men chicken producers on the local meaning of empowerment, chicken trait preferences and livelihoods. Each group was given a number of counts to score the preferred traits and rate the chicken breeds against the preferred traits. The number of scores varied based on the number of traits to rank. Each group constituted of about 8–12 participants. The study was conducted in selected villages within the ACGG intervention districts per region, based on the agro-ecology and culture, to determine whether trait preferences vary by agro-ecology and culture (Table 1). Annexe 1 provides the intervention districts and selected villages. Before the fieldwork, data collectors were trained on how to implement the data collection tools and the guide was later translated into the Amharic and Afaan Oromoo languages. Training included a one-day field piloting to revise the methodology and tools and to make them 'fit for purpose'. The note takers documented the interviews and discussions in field notebooks. After data collection, the handwritten notes were checked for accuracy and expanded into complete narratives.

Data analysis started at the end of each day. First, the research team reviewed and summarized the discussion from each FGD, categorizing the findings into the subthemes. Next, the findings of all FGDs conducted in each region were compiled into individual regional reports. The third and final step was to look across reports, summaries and transcripts to establish the emerging themes and key findings specific to the objectives, and to illustrate the themes and findings with quotes

Table 1. Description of study sites per region

Region	Woreda (district) surveyed	Kebele (village)	District population*		Average household size	Religion	Ethnicity	Agricultural production systems	Agro-ecology
			Females	Males					
Amhara	Kalu	Addis Mender	91,994	94,187	4.5	Ethiopian Orthodox Christianity (82.5%), Muslim (17.2%) and others	Dominated by the Amhara speaking group. The Agaw/Awi, Oromo, Agaw/Kamyir and Argobba are minority groups.	Mixed crop-livestock but dominated by crops mostly wheat, faba bean, barley, teff and potato. Major livestock species are cattle, sheep, goats and poultry.	Very cold submoist mid highlands
	South Achefer	Lihudi	67,269	69,239					
	Gondar Zuria	Tsion Teguaize	94,006	97,388					
Oromia	Adami Tulu	Anao Shisho	70,238	71,167	4.8	Muslim (47.6%), Ethiopian Orthodox Christianity (30.4%), Protestant (17.5%) and others	Oromo (87.8%), Amhara (7.2%) and other ethnic groups	Mixed crop-livestock production system. It is a wheat dominated mono-cropping system. Other crops are barley, faba bean and field pea. Major livestock species are cattle, sheep and goat.	Cool sub-humid mid highlands
	Dano	Bake Sirba	48,650	48,593					
	Haramaya	Adele and Biftu Geda	132,736	138,282					
	Darolabu	Odaluku	52,872	49,487					
	Dara	Kumato	78,790	76,475					
Southern Nations, Nationalities and People's (SNNP)	Bolosso Sore	Gido Homba	101,581	96,392	5.5	Protestants (55.5%), Ethiopian Orthodox Christianity (19.86%), Muslim (14.12%), Catholic (2.4%) and others	Diversity of ethnicity and languages	Mixed crop-livestock dominated by crops. Major crops are wheat, faba bean, teff and ensset. Major livestock species are cattle, goat, sheep and poultry	Tepid peri-humid mid highlands
	Meskan	Mekicho	79,386	76,396					
	Doyogena	Gomora Zawada	40,029	38,605					
	Saharti Samre	Hayelom	62,472	61,868					
	Tahtay Machew	Metkellimat	50,499	48,623					
Tigray	Kolle W.3	Ketene OI	221,254	207,641	4.6	Ethiopian Orthodox Christians (95.6%), Muslim (4%), Catholic (0.4%)	Tigrayan (96.55%), Amhara (1.63%) and others	Mixed crop-livestock. Major crops are wheat, barley, faba bean, potato and field pea. Major livestock species are sheep, cattle and poultry.	Very cold sub-moist mid highlands
	Nefassilk W.I	Eritu Mojo	167,299	148,984					
Addis Ababa					5.3	Ethiopian Orthodox Christianity (82%), Muslim (12.7%), Protestant (3.9%), Catholic (1%) and others	Dominant tribes are Amhara (47.0%), Oromo (39.5%), Gurage (16.3%) and others	City dwellers participate in animal husbandry and crop production.	Subtropical highland

*Population data were obtained from Central Statistical Agency (2007)

Results

Local meaning of empowerment

Before defining the term 'empowerment', it is important to agree on the local terminology to inform the subsequent discussions. In this section, we present the local meaning of empowerment (as defined by our respondents) and the characteristics of an empowered woman and man, as defined by men and women chicken producers in the four regions.

SNNP region

The women elicited *Mino, Durecha, Tenkaka, Aktilot and Ekitino* as local terms for empowerment, which mean one who is 'strong' or excels. From the women's group discussion, an empowered woman is one who saves money and uses it wisely, cares for and educates her children, is knowledgeable and ingenious at what she does, works hard, cooperates with family and is responsible. On the other hand, a disempowered woman does not care for the health/wellbeing of her family members and the environment; she is not self-sufficient; she has bad character and has no working culture. Empowered women are respected and listened to and considered model women in the community by both men and women.

Similarly, the local terms for 'empowerment' as elicited by the men are *Durecha, Tenkaka, Aktilot and Ekitino*. According to the men, an empowered man is one who intensively participates in agricultural activities, uses new/improved technology such as compost and improved seed, saves money and uses it appropriately, educates his children and cares about their health, participates in other business activities, is not addicted to stimulants and is sociable with other people. A disempowered man is one who drinks alcohol, does not use money wisely and does not save money, is jobless, does not respect rules and regulations, does not like to work, does not feed his family well and seeks aid from others.

Oromia region

The women's group elicited the terms *Ga'oomtuu, Duree, Moodeela and Cimtuu*, which mean one at the forefront in all aspects of life or a model. The women characterized an empowered woman as one who is hardworking/has a strong working culture, has a good understanding with her husband, is involved both in household and farm work, self-reliant, educates her children, saves money, performs her activities according to plan and uses family planning. Such women are well appreciated by other women and men in the community and looked up to.

The local terms for empowerment as defined by the men are *Ga'oomuu, Adda Duree, Goota Misoomaa and Moodeela*—one who stands out from the crowd. The men's groups characterized an empowered man as one who works hard, manages and cares for his children and all family members, educates his children, is economically self-reliant year around, uses farm equipment (including traditional and modern), uses fertilizer and produces enough produce, uses his time properly, fattens his animals and earns good income, creates jobs for his children during their resting time (slack season), has good understanding with his wife, actively participates in training and works in groups with his friends to complete farm work. On the other hand, a disempowered man is one who does not educate his children, does not participate in any given training, does not agree with his wife, does not use important technology to produce enough produce and does not use his time properly.

Amhara region

The women's group used the term *t'enikara* which implies 'strong' to mean empowerment and described an empowered woman as one who is hardworking, has the ability to lead her family, participates in leadership and any social affairs, equally participates in agriculture with her husband, is able to make energy-saving cooking material, cleans her house and toilet daily, executes assigned duties, can decide by herself, makes *arekie* (local brew) and can sell cattle by herself. Characteristics of a disempowered woman include one who cannot clean her home and equipment, cannot care for her children, is lazy about doing household chores, cannot save money, can work but is not interested in work, does not participate in common social affairs, cannot work but rather walks to other people's homes to drink all day or sit and talk, and does not support her husband in terms of income. Women must seek permission to use family planning.

In this region, the men used the terms *jegina*—which means a hero—and *iwik'eti yalewi* which means knowledgeable. Traits that describe an empowered man are one who rears improved livestock breeds, is hardworking in crop production and intensively participates in agricultural activities, uses new/improved technology (such as compost, improved seed and irrigation), produces all crops according to season, produces and sells vegetables such as potatoes and carrots, carries out his activities by plan, educates his children, saves money, handles his property well, has a leadership position in the community, mediates conflicts, is listened to by the community, uses agricultural extension services and participates in social activities in the community. Other men want to do as he does and the wife of such a man is considered lucky.

On the other hand, the characteristics of a disempowered man are one who does not carry out farming activities on time (e.g. plowing, sowing and harvesting animal feed among others), is careless in handling of his animals, is weak in decision-making in the home and society, loses his confidence, drinks alcohol during working days, actively participates in theft of property, has ability to work but not willing to work, does not educate his children and rents out his agricultural land.

Tigray region

The FGD with men used the term 'model' to mean empowerment and the characteristics that define a man who is a model include one who participates in conflict resolution and advises the community, is hardworking and improves his livelihood, manages his livestock properly, manages his agricultural activities timely, uses organic and/or inorganic fertilizer on his land, has good understanding with his wife and whole family, is not addicted to alcohol and engages in on-farm and off-farm activities. Such men are examples to the community and get respect and love from the community. A disempowered man is one who does not manage his animals, does not manage his agricultural activities like weeding, harvesting and plowing in a timely manner, does not agree with his neighbors, does not raise his children properly and is addicted to alcohol.

Likewise, the women's group in Tigray region characterized an empowered woman as one who is involved in agricultural activities and is able to manage farm activities in the absence of the husband, practises weeding, soil and water conservation, and harvesting, manages her animals and also adopts different agricultural technologies which are introduced by government and other stakeholders in the community, saves money and manages her home properly, and is on good terms with her husband and whole family. The characteristics of a disempowered woman are one who does not carry out agricultural activities, does not save money, does not manage her home properly and does not manage her animals. The empowered women are considered 'model' farmers and have good acceptance in the community, serve as examples to the community and get respect and love from the community. The husbands of empowered women are very supportive.

Addis Ababa

During the FGD with men in the city government of Addis Ababa, empowerment was referred to as *Beku yehone sew*, *seketama* which mean achiever or one who has excelled. Such men are active and productive, wealthy and fulfill all their livelihood needs, examples to others in the community and skilled to do something and succeed. An empowered man is educated, educates his children, works actively, has a good vision, uses important technology, has good behaviour, actively manages his family members, is honest to others, works according to plan, is free from any

addiction, is knowledgeable about his life, does not oppose other people's ideas, creates jobs for other people, does any available work, is in agreement and good understanding with his wife and children, and always advises his children about education.

On the other hand, a disempowered man is one who does not like to work, does not educate his children, spends his time in wrong places, does not agree with his wife, has bad manners, opposes other people's ideas, is unable to fulfill his household needs, depends on his wife's labour, does not want to work, is addicted to stimulants, steals other people's property and has no vision.

The women used the terms *tatari* and *t'enikara* which mean active and strong. An empowered woman is active and carries out her activities according to the plan and uses her time properly. She is an example to others, is active in household decision-making, has good behaviour, educates and respects her children, trades in the local market, saves money, respects her husband, solves problems/finds solutions for others and is a leader for others. The characteristics of a disempowered woman are does not have the culture to work, careless, depends on others, does not think of tomorrow, opposes other people's ideas and spends time in inappropriate places like the drinking house.

What empowers women?

Table 2 below shows what empowers women (process) at both household and community levels, from both women's and men's perspectives in the four regions.

Developing women's entrepreneur skills

In all the regions, the development of women's entrepreneur skills stood out strongly as one of the mechanisms to empower women, mentioned by both women and men. This can be achieved through training, providing women with starter capital and giving equal chances to take advantage of available opportunities. Women's entrepreneurship can also be enhanced if women have equal access to resources, decision-making power over productive resources and an enhanced capacity to manage resources such as money saving skills. This reflects the importance of knowledge in economically empowering women—women's capabilities need to be enhanced for them to be empowered. Women chicken producers need capacities to manage chicken as a business.

Developing self-confidence and self-efficacy

This is very critical as it encourages women to do 'things' that they have not done before. This can be achieved by encouraging women to share their ideas and listening to/accepting their ideas as well as developing their knowledge. Education of children is mentioned as a key aspect of women's empowerment as knowledge can be passed on from children to their mothers. Being knowledgeable enhances women's confidence which in turn builds their voice. This attribute emerged more among the men's groups compared to the women's groups across the regions.

In all the regions, it is mostly men who participate in community meetings. It is men who speak up and lead the meetings, and they make decisions as well. Increasingly, women are being encouraged to attend meetings. In Tigray region, although men and women have equal chances to participate in decision-making during community meetings, men have more influential power and dominate decision-making.

Reducing women's workload

Reducing women's workload through social support to create more time for women to engage in productive activities and be more mobile was also elicited more by the men's groups. Additionally, the transformation of constraining culture was mentioned by men and women in Tigray region, although it is a challenge in all the regions. This implies that men are actually aware of women's workload—attributed to norms—and the need to overcome the challenge in order to help women act towards their desired goals.

Mobility

Mobility was not mentioned as an indicator of an empowered woman although listed as a requirement for empowerment and one of the factors that constrains women. In all the study sites, both women and men noted that women can move unaccompanied to places within close proximity to their homesteads such as market, funeral, *idir*,² wedding, searching for firewood, fetching water, visit the sick, church/mosque, village meeting places, grain milling house, grazing field to feed their livestock and farmlands. Both the men's and women's groups indicated that there is no place that women would like to go to but can't. However, there were conditions attributed to their mobility, e.g. a woman can go with her neighbors/friends to attend any given training. If accompanied by their husbands, women can go to the places they want. By asking permission from their husbands or family members, they can go far from home, spend nights away from home, go to weddings and funerals and visit relatives. However, Muslim women never go to burial places.

Women never go to inappropriate places like drinking or dance houses. Young or unmarried women are not allowed to go alone to places far from home. They are protected by their families. Nobody sets the rules where women or girls can go. It is socio-cultural norms and that are respected by women (single or married) and young girls. Any woman who violates the norms is considered a social deviant and other women do not want to emulate her. There is no change in these norms because of the ACGG project. Lack of income, as well as workload, also constrain women's mobility.

In Amhara, although women would like to go to recreational places and traditional doctors (spiritual house called Tenkway bet), they cannot. However, as a result of the ACGG project women's mobility has increased as they participate in training and are able to frequently go to marketplaces to sell eggs and/or purchase items for their households. In Tigray, women can go to a restaurant or hotel only with permission from their husbands and are restricted from going to the bar. According to the men and women in Addis Ababa, women would like to go to the recreation centre, swimming pool, historical places, zoo, parks and to visit higher government offices but cannot. They can go to the hotel, cinema and far places if accompanied by their husbands. The only change as a result of the ACGG project is that women are going to the marketplace to sell their eggs and chicken and also to buy chicken feed and other important inputs for chicken.

Leadership

Across the four regions, in recent years, women's participation in leadership and other areas of responsibility has increased due to government sector and nongovernmental organizations (NGOs) that have given attention and enhanced women's capacities and awareness through training. Both men and women in the Oromia, Addis Ababa and Tigray regions believe that holding a leadership position in the community is appropriate for women (such as administrator, village chair or leader of women's association). 'Now women are holding many leadership positions starting from village women affairs to higher positions.' —Men's group, Oromia

Yes, holding a leadership position in the community is appropriate for women, especially women holding leadership at each level starting from village to higher level like federal level. This is not only essential for women but also one mode of motivating or initiating young generations to pursue education particularly female students, as they look up to empowered women. Therefore, it is important to give women basic education. Women do not get the opportunity to attend formal education so inviting them to all meetings and training is helpful. —Women's group, Oromia

In the Amhara region, the male group participants stressed that it is not appropriate for women to hold leadership positions because they are involved in household chores. This trait did not emerge in the men's group as a characteristic of an empowered woman. On the other hand, women noted an increase in their participation in different leadership positions and training activities at different levels. However, their leadership was mostly in woman-related organizations such as women's associations, women's league, women's federation forum and the like, and not community-based positions.

² Idir is a grassroots life insurance.

Table 2. Women's and men's perspectives on what empowers women

Region	What would empower women?	
	Women's perspectives	Men's perspectives
SNNP	Supported to engage in income-generating activities	Support to engage in income-generating activities
	Develop their capacities through training and education	Develop their capacities through training and education
	Given freedom of mobility and to decide	Give freedom of mobility and to decide
	Give them equal opportunities as men	Give them equal opportunities as men
Oromia	Given the freedom to access and own household resources	Give the freedom to access and own household resources
	Developing their entrepreneur skills to enable them to earn a good income.	Educate them well
	Training them about overall chicken management	Give them support on all household activities to reduce workload
	Capacity to save money	Given a chance to take part in training
	Give them a chance to attend important training or meetings	Accept their ideas as this can improve their confidence
	Give them equal opportunities with men	Select them for leadership positions
	Encourage them through sharing experiences from other knowledgeable women	Advise women to educate their female children equally with their male children since a female child is the main teacher for her mother—she can learn from her children and can easily empower herself
	Develop their capacity to manage and use their property	
Amhara	Facilitate initial capital	
	Provide different practical training	Provision of different practical training on different aspects e.g. chicken production and entrepreneurship
Tigray	Support them with different resources and money to engage in different livestock production activities	Support them with resources and money to engage in different livestock production activities
	Provide land for livestock production	
	Give them the freedom to go anywhere	Equip women with chicken and home management skills
	Give women the opportunity to participate in different workshops and training	Develop women's capacity by involving them in various workshops and training (short and long term)
Addis Ababa	Help women with home activities	Support women to reduce their workload
	Change constraining cultural norms	Change constraining cultural norms
	Create jobs for women	Give women equal opportunities with men to obtain training
	Facilitate credit services to enable them to invest in income-generating activities	Encourage women to share their ideas to improve confidence
	Increase access and availability of productive chicken types	Husbands need to encourage their wives and give them advice
	Give women equal opportunities as men in every community activity like meetings/training as they can share their ideas and learn from others	Women and men role models share their experiences with other women and men
		Develop their business skills through short-term training

Role of livestock in empowering women

Livestock is one of the main sources of income for households and its importance is even higher for households with land shortage. Both women and men in the FGDs agreed that livestock can empower women by giving them income (through selling eggs and chicken, fattening animals, selling milk and milk products) which is used to run other businesses, educate children and meet household needs with less dependence on their husbands. Livestock is also a

source of food. Livestock helps women develop confidence and it is used as an asset to guarantee payments. Sheep and goat can generate money during crop failure, and this can empower women. The manure from livestock increases crop production for food and income. A participant in the women's group in Addis Ababa remarked:

Livestock can empower women by being a source of income, source of food, used as an asset and livestock manure is used for backyard vegetable production. Sometimes animal dung is used as energy for preparing *injera*. —Women's group, Addis Ababa

More specifically, chickens can empower women since it is mainly managed and controlled by women and the income (through the sale of chicken and their products) is controlled by them, using it to cover household needs and startup capital for other businesses without asking for money from their husbands. The eggs and chicken are consumed at home and women make the decisions regarding consumption. Chickens serve as women's assets. The local chickens are raised for brooding eggs of improved birds since their brooding trait is poorly developed. Women are in a better position to decide on the best traits, but such decisions tend to be made jointly by spouses and are sometimes dominated by men. Women can easily differentiate between productive and unproductive chickens. Since the rearing of chickens does not require a large space, women can keep large numbers of chickens and earn income to cover the household needs.

By selling chicken and chicken products women can buy more chickens, other livestock like sheep, goats and heifers, purchase household assets and purchase quality food for the children. Chicken is also an important ingredient in the traditional Ethiopian dish (a woman's role) hence considered very important.

Chicken can empower women since chicken is the main and basic source of income for women, and a source of food (chicken egg is essential for breakfast, especially for the children). During the time of the festival/holiday, we do not buy chicken from the market to cook *doro wet* (traditional food). —Women's group, Addis Ababa

A woman is the main person who takes chicken and chicken products to market and sells. They use any available market to sell chicken and chicken products like village market, district markets etc. —Men's group, Aneno Shisho

The income from selling chicken is controlled by women because in our village men do not ask us for income from the chicken so we use it to cover some home expenses. —Women's group, Aneno Shisho

Figure 1 is a framework that shows how chicken can empower women. Although the process looks linear, in reality, it is not linear, showing the short, medium- and long-term gains.

Typically, chicken production in Ethiopia is performed by adult women although adult men, young men and young women are also involved. Success in chicken as a business can be registered among people with good work ethic, visionary, interested and open to learning. Specifically, women are better at raising chickens as it can be done concurrently with the household caring roles. According to the men, women are the best at managing chickens because they spend most of their time around the homestead, which is ideal for protecting chickens from predation and cannibalism, provision of feed and water, and control of their movement while scavenging. Women are also more knowledgeable about chicken management and very active in that regard. The men in Dano (Oromia region) added that young men, young women and adult women who are not busy with farm work are better at raising chickens. In one of the men's group, the participants remarked:

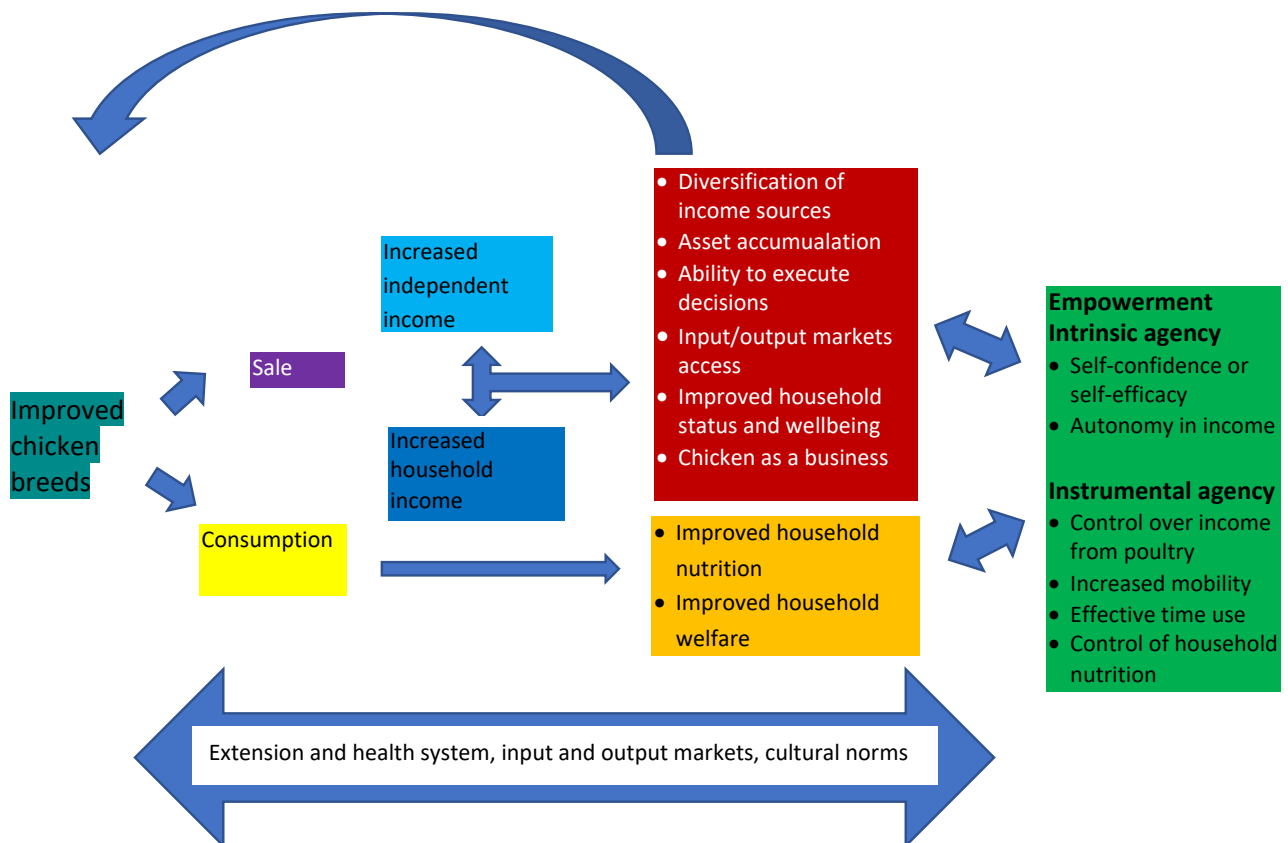
Women exceed in rearing chicken because they require a person who is always around the house to protect chickens from predators and give them water and feed and control where they are going for scavenging. People who keep around the home area also protect the chickens from cannibalism. —Men's group, Aneno Shino

The prevailing constraints to chicken production make it difficult for smallholder women and men to profit from the enterprise. The major constraints, in order of importance, as mentioned by women and men are:

- Disease prevalence

- Lack of formulated feed, quality feed and high feed price
- Poor veterinary services—poor access to drugs, vaccines and qualified vets
- Predation due to lack of appropriate shelter. Irrespective of breed, chickens are raised under the free-range system where chickens scavenge any feed resource around the homestead during daytime and are sheltered during the night.

Figure 1. Framework for women's empowerment through poultry.



Other constraints include lack of knowledge on poultry management, absence of a good market for products, lack of access to improved and productive breeds, cannibalism, poor infrastructure (including roads, lack of electricity and water), lack of adequate capital to expand the farm and poor biosecurity measures. Factors that were unique to women are lack of income/employment (dependence on husbands) and lack of awareness creation/training before chickens are attacked by disease. All these factors hinder chicken production, thereby undermining their potential to empower women economically, socially and politically. In one of the women's groups, participants remarked:

When chickens are affected by the disease the probability of recovering is very low and therefore, we lose many birds due to that and when we lose birds that we have fed for a long time, one is economically affected. (women's group, Addis Ababa)

If the government could provide us the knowledge of chicken production and management systems when they give us the chickens, it would be good for us to be able to successfully carry out chicken production. — Women's group, Aneno Shisho

Aspirations of women and men chicken producers

In SNNP, women and men chicken producers' goal for the next 5–10 years is expanding chicken production and investing in other businesses (e.g. shops), and produce cattle, sheep and goats. In the next 5–10 years, the men chicken producers in Oromia and Amhara aspire to increase the number of chickens and expand their chicken farms because of increase in the price of eggs and chicken. Similarly, the women in the region aspire to expand their chicken farms from backyard production to commercial production by using improved chicken breeds, modern chicken farm equipment and building good chicken houses (if they obtain important inputs like capital, feed, vaccine, expert advice and good market). They also aspire to earn higher income from selling eggs and chickens. Getting additional income from chicken production allows families to educate their children in better schools and for the children to complete their education. The ACGG project can support women by providing improved poultry breeds, vegetables (for feed), formula feed, medicine and giving different practical training and credit services.

The men and women in Tigray aspire to have more than 50 chickens per household and improved poultry houses. Additionally, the women aspire to increase their income from the sale of chicken and chicken products and manage the chickens better to increase their production. The ACGG project can support them by increasing access to alternative chicken breeds and creating awareness on the importance and management of chicken to create demand.

In the next 5–10 years, the men's groups in Addis Ababa envisioned expanding chicken production and increasing the number of chickens by improving chicken feeding, watering and overall management of chicken if they receive an adequate supply of vaccines. Through this, they will improve their livelihoods and balance their income and expenses. The women chicken producers in Addis Ababa envision expanding chicken production by adopting modern chicken production facilities and plan to live a better life by increasing daily income. This vision is challenged by fear due to lack of enough capital, chicken feed, vaccine, veterinary experts and chicken breeds.

Indicators of change

For women chicken producers, indicators of change include: supply of many chickens to the market, improved household nutrition, increase in daily income, increased ability to meet daily household expenses/needs through sale of chicken and eggs, increase in purchasing power, fulfillment of all education needs for their children, quality education in good schools for their children, increased savings, building beautiful houses, knowledgeable community, availability of improved poultry breeds, more profitable businesses, shift from plan to action and creating jobs.

Men chicken producers include the following as indicators of change: increase in number of chickens raised, informed communities, availability of improved breeds, increased ability to meet household needs, ability to educate children to completion, selling of many eggs and live chicken, changes in individual lifestyle, modifying existing old poultry houses and building new extra poultry houses which can be rented out.

What does this tell us?

The results show some variations in how community members define an empowered woman or man. Aspects relating to the use of improved agricultural technologies and working intensively on the farm were more associated with empowered men. Women who are engaged in agriculture are considered very empowered since the trait is ideally attributed to men except in Tigray where both men and women elicited the trait in relation to a woman who manages agricultural activities even in the absence of the husband. Lack of confidence is disempowering to both men and women but more disempowering to men. Leadership was attributed to one's ability to resolve conflicts and manage others rather than membership to influential groups (an indicator commonly used to assess empowerment). Leadership traits for an empowered woman were cited strongly in the Amhara region by women. One's ability to use time effectively/productively is empowering to both men and women. One's ability to create jobs for others is also a trait for empowered men, which could imply leadership. Empowered women innovate technologies that fit within their ideal feminine roles and their accumulation of assets from poultry is limited to small household equipment to be able to fulfill their reproductive roles.

Mobility can be both a process and an outcome of empowerment in a manner that mobility increases women's ability to access important places like training venues, markets and health facilities among others. On the other hand, the realization of benefits from poultry production increases women's chances of mobility without being accompanied. Poultry has potential to empower women since it is managed and controlled by women. However, this can only happen if production constraints are addressed as well as structural and institutional challenges. Women aspire to increase chicken production alongside cattle, sheep and goat production to distribute risk. Chicken can be empowering if it becomes a business where women and men produce at least 50 chickens and more. Women still face challenges to profitably benefit from chicken and the relations between men and women may restrict their autonomy and freedom of mobility to important locations. For chickens to empower women, it is imperative that chicken production constraints and constraining power relations are addressed, and the structural system is transformed in which poultry production is embedded.

Although governments and donors advocate for the economic empowerment of women, the indicators and means of empowerment above demonstrate that the economic empowerment of women by improving their 'self' alone is not enough. Social relations are still important for both women and men to be empowered such as being in good relationships with spouses and others, good social conduct, the fulfillment of social responsibilities and supporting others strongly emerged as indicators of empowered women and men. The ability to use birth control is mediated by good social relations. Additionally, the social structures, such as markets and government institutions, in which the roles of women and men poultry farmers are embedded influence their ability to achieve their aspirations.

Chicken trait preferences

In this section, we present results from the analysis of trait preferences by women and men across five agro-ecologies in rural and peri-urban Ethiopia. The ACGG program aims at breeding chickens that are adapted to given agro-ecologies to enhance productivity in a specific village production environment. However, it is also imperative to consider trait preferences from a gender perspective and integrate these preferences into the breeding program in order to benefit women who are the main caretakers of poultry. The results are presented by gender and region.

Amhara region

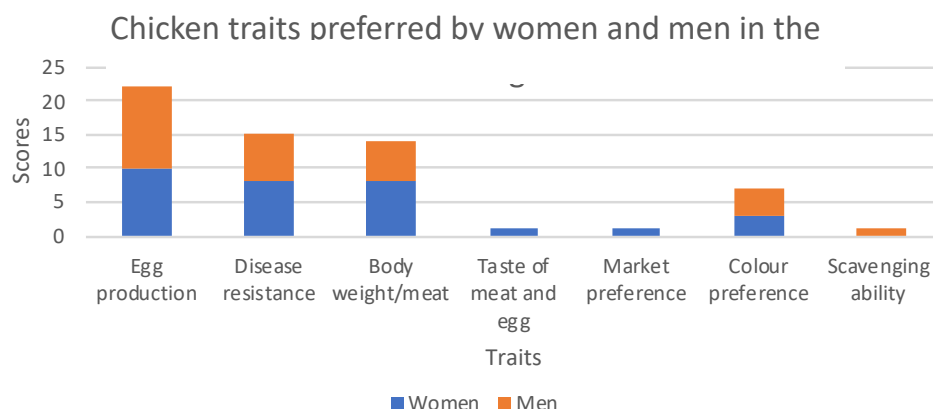
Ranking of preferred traits

When asked to rank the traits of the different breeds of chicken raised, there were similarities in trait preference among women and men (Table 3). Using a score of 5, both men and women ranked egg production, disease resistance and weight/meat as the most preferred chicken traits followed by feather colour (Figure 2). Although women in Kalu district added the taste of meat and market preference, these traits received the lowest scores. In Lihudi village, men highly prioritized colour, probably because it determined the market demand but also because of the cultural and spiritual value attached to feather colour which influences acceptability within the communities.

Table 3. Chicken traits preferred by women and men chicken producers in the Amhara region

Trait	Kalu district, Addis Mender village		South Achefer district Lihudi village		Gondar Zuria district TSION Tsegaje village	
	Men	Women	Men	Women	Men	Women
Egg production, large egg size and laying frequency	4	3	4	2	4	5
Disease resistance	5	4	-	4	2	-
Body weight/meat	1	2	2	3	3	3
Taste of meat and egg	-	1	-	-	-	-
Market preference	-	1	-	-	-	-
Colour preference	-	-	3	1	1	2
Scavenging ability	-	-	1	-	-	-

Figure 2. Chicken traits preferred by women and men in the Amhara region



Ranking of breeds against preferred traits

Table 4 below shows the scoring and ranking of different breeds against the preferred traits. While the women's group ranked the breeds, the men's group scored the breeds. The men's group scored Kuroiler as the breed with the most preferred traits followed by Sasso RIR and the local breed in second place, then pure Sasso in third place, and Koekoek and Horro in fourth place. The men ranked Kuroiler first because it has relatively high disease resistance and high production in terms of eggs and meat, and the meat is tasty and accepted by the community. The men have raised these breeds for about two years and indicated that they thrive better in a warm environment and mid-altitude. The men wanted the disease resistance trait to be improved and to increase the ratio of male to female chickens in a flock.

Unlike the men in the region, the women group ranked Sasso as the best poultry breed because of its good body weight gain, the quality and quantity of eggs they lay, relatively disease tolerant nature, and better test of meat and eggs. Sasso has better productivity and better weight gain which generates higher income for the household. This was followed by Kuroiler, Koekoek, then Horro and lastly the local breed. Similarly, the women indicated that they have raised the breeds for about two years.

Table 4. Ranking and scoring of chicken breeds against preferred traits by women and men in Amhara region

Trait	Local		Sasso RIR		Pure Sasso		Kuroiler		Koekoek		Horro	
	Men (score)	Women (rank)	Men (score)	Women (rank)	Men (score)	Women* (rank)	Men (score)	Women (rank)	Men (score)	Women (rank)	Men (score)	Women (rank)
Egg production (quality and quantity)	1	4	2	1	1	-	4	2	1	3	1	5
Disease resistance	3	5	2	1	1	-	2	2	1	3	1	4
Weight/meat	1	5	1	1	2	-	4	2	1	3	1	4
Test of meat and egg	-	1	-	2	-	-	-	3	-	4	-	2
Market preference	-	3	-	1	-	-	-	2	-	3	-	2
Total	5	18	5	6	4	-	10	11	3	16	3	17

*Missing data

Ranking: 1–5, 1 being the best and 5 the least

Changes in trait preference over the past 10 years

In the Amhara region, the men have noticed changes in trait preference over the past 10 years, with an increase in preference for egg-laying birds because of the high price for eggs. Change in preference is driven by high market demand for chicken and eggs and the involvement of different organizations in the sector to improve poultry production. In the past three to five years, chicken production has changed with more farmer involvement in the production of exotic breeds (promoted by government and NGOs), an increase in flock size and implementation of better poultry management practices such as health management, feeding and housing.

Tigray region

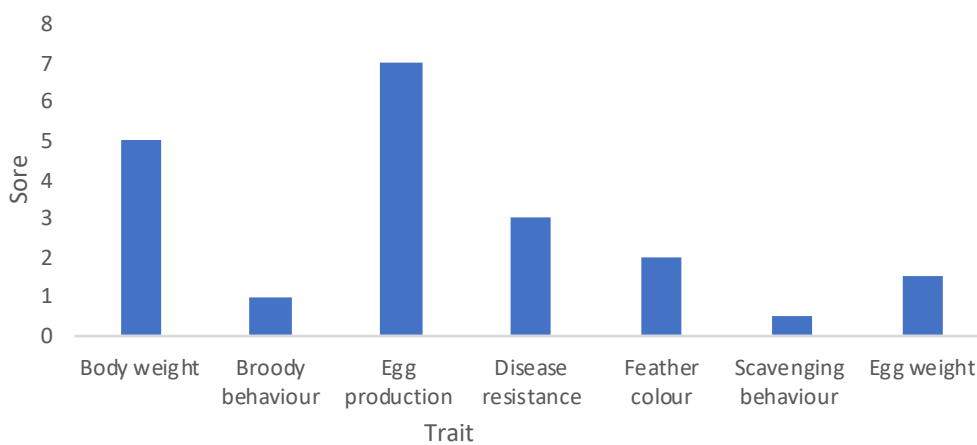
Ranking of preferred traits

In Tigray, the ranking of preferred traits was done by one women's group only because of the challenges faced in mobilizing the chicken producers. The study was conducted during the onset of rains and poultry producers were busy working in the crop fields. The preferred traits are presented in Table 5 below. Of all the preferred traits, using a total of 20 seeds, egg production ranked highly followed by body weight and disease resistance. Figure 3 shows a visual representation of the preference.

Table 5. Preferred chicken traits by women in Tigray

Trait or quality	Score	Rank
Body weight	5	2
Broody behaviour	1	6
Egg production	7	1
Disease resistance	3	3
Feather colour/ market demand	2	4
Scavenging behaviour	0.5	7
Egg weight	1.5	5

Figure 3. Scoring of preferred chicken traits by women in Tigray



Ranking of breeds against preferred traits

Using a score of 5 to rate each breed, the women ranked the local breed first although it has a small body size and low egg production (Table 6). If these traits were improved, then the local breed would be the most preferred. The local breed and Horro have good broody behaviour resistant to disease and the feather colour is attractive to the market. Sasso and Kuroiler ranked highly as well because of their egg production, body weight and good feather colour.

Table 6. Ranking of chicken breeds against the preferred traits by women in Tigray

	Horro	Koekoek	Sasso RIR	Local	Kuroiler
Broody behaviour	3	1	0	5	0
Egg production	4	4	5	3	5
Body weight	3	3.5	3	2	5
Disease resistance	4	3	2	5	0
Feather colour and market demand	4	1	5	4	3
Total	18	12.5	15	19	13

Changes in trait preference over the past 10 years

Over 10 years, chicken production has received increased attention from government and donor agencies. There is an increase in the price of chicken and eggs due to increased demand. Community members have more awareness about chicken production although the preferred breeds like the local breed have reduced in number and some unwanted breeds have been introduced. The introduction of new breeds has introduced many new diseases that have affected the poultry production system. Currently, only specific types of chicken breeds are promoted with no support to improve the local breeds. Such changes have occurred as a result of increased population growth, lack of grazing land, government programs, climate change and awareness of the community.

Oromia region

Ranking of trait preferences

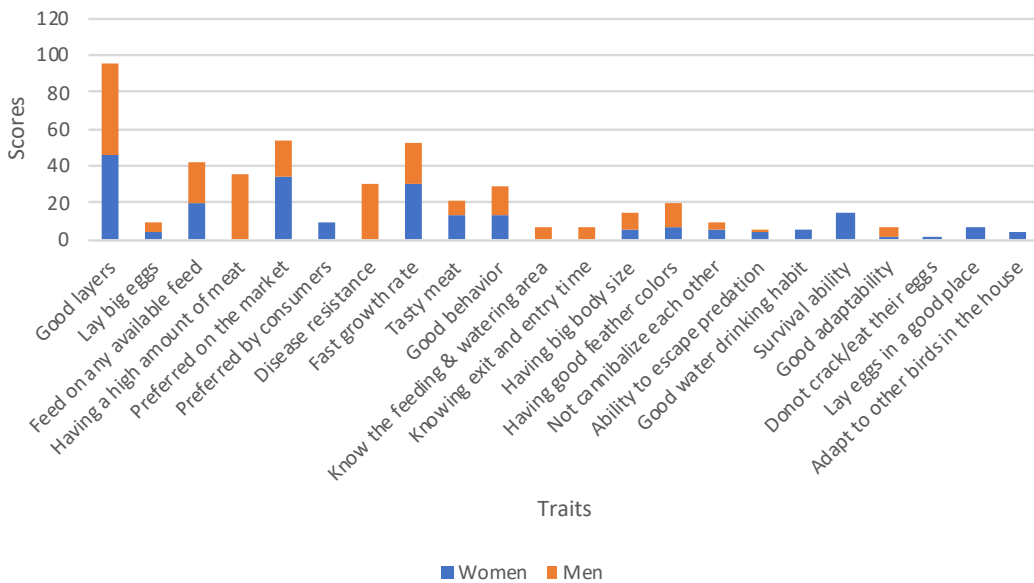
Table 7 below shows the scores of the most preferred chicken traits by women and men in Oromia region. Each trait was evaluated using a high score of 10. Overall, the most preferred traits by the women and men poultry producers in the Oromia region are egg production potential, ability to feed on any available feed, market preference, fast growth rate and good behaviour (Figure 4). The men ranked high amount of meat (body weight), disease resistance and feather colour higher while the women ranked market preference, growth rate, good survival ability and tasty meat higher.

Table 7. Scores of chicken traits preferred by women and men in the Oromia region

Trait	Biftu Geda		Adele		Anano Shisho		Dano Bake Sirba village		Daro Labu district, Oda Laku village	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Laying many eggs/good layers/daily egg laying	10	10	10	10	10	9	10	8	10	9
Big eggs	-	-	-	-	3	1	1	2	1	1
Feeding any available feed	-	7	6	3	4	6	6	-	6	4
High amount of meat	9	-	9	9	-	-	9	4	9	-
Preferred in the market	8	9	7	8	5	5	-	7	-	5
Preferred by consumers	-	9	-	-	-	-	-	-	-	-
Disease resistance	-	-	8	-	8	-	7	-	7	-
Fast growth rate	-	8	-	-	7	8	8	6	8	8

Trait	Biftu Geda		Adele		Anano Shisho		Dano Bake Sirba village		Daro Labu district, Oda Laku village	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Tasty meat	-	-	-	-	-	6	4	1	4	6
Good behaviour	-	-	-	4	6	2	5	5	5	2
Know the feeding and watering area	5	-	2	-	-	-	-	-	-	-
Knowing exit and entry time	7	-	-	-	-	-	-	-	-	-
Big body size	6	5	4	-	-	-	-	-	-	-
Good feather colour	4	2	5	5	-	-	2	-	2	-
Not cannibalize each other	-	-	3	6	-	-	-	-	-	-
Ability to escape predation	-	4	-	-	2	-	-	-	-	-
Good water drinking habit	-	-	-	-	-	3	-	-	-	3
Survival ability rate	-	-	-	-	-	7	-	-	-	7
Good adaptability	-	1	-	-	-	-	3	-	3	-
Do not crack/eat their eggs	-	-	-	2	-	-	-	-	-	-
Lay eggs in a good place	-	-	-	7	-	-	-	-	-	-
Adapt to other birds in the house	-	-	-	4	-	-	-	-	-	-

Figure 4. Ranking of traits preferred by women and men in the Oromia region



Ranking of breeds against preferred traits

Table 8 below shows the ranking of the chicken breeds against the preferred traits. Overall, Koekoek and Sasso had the highest scores but with variations among women and men (Figure 5). The men scored Koekoek slightly higher than Sasso RIR, while women ranked Sasso RIR higher than Koekoek. The local and Horro breeds received lower scores from women. Sasso RIR and Koekoek lay eggs daily, are of relatively large size and are preferred in the market. Both men and women indicated having grown Sasso RIR for at least two years, thriving better in the temperate areas. Sasso and Koekoek are, however, very susceptible to disease and poor at escaping from predators. On the other hand, Horro and the local breed have low growth rate, small body size and very low egg production but have high survival rates, tasty meat and are able to escape from predation. The traits to be improved as proposed by women and men in Oromia include egg production (since it is the main product), meat yield, disease resistance, ability to feed on any available feed, adaptability, survivability and growth rate.

Since our main target is to improve the production potential of chicken, without feed and good health services, we cannot improve production. —Men's group, Aneno Shisho

Table 8. Scores of chicken breeds against preferred traits by women and men in Oromia

Village	Preferred trait	Koekoek		Sasso RIR		Horro		Local		Kuroiler	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Biftu Geda	Daily egg eggs	8	8	9	9	5	4	5	-	-	7
	High amount of meat	10	10	9	9	4	5	4	4	-	5
	Good at hatching egg	2	-	4	-	10	-	10	-	-	-
	Resistant to diseases	5	-	6	-	8	-	7	-	-	-
	Consume any available feed	6	7	7	6	7	8	6	8	-	7
	Preferred in the market	8	5	7	7	8	7	10	6	-	5
	Preferred by consumers	-	5	-	6	-	3	-	10	-	5
	Knowing exiting and entering time	4	-	5	-	9	-	7	-	-	-
	Ability to escape predators	2	4	3	5	10	10	10	10	-	5
	Good feather colour	7	5	8	7	6	7	8	6	-	5
	Knowing owners	7	-	5	-	9	-	8	-	-	-
	Overcoming scarcity of feed and water	1	-	2	-	9	-	9	-	-	-
	Not go far from house compounds	2	-	4	-	8	-	9	-	-	-
	Fast growth	-	10	-	10	-	6	-	7	-	6
	Big body size	-	10	-	8	-	4	-	5	-	7
Tolerant of existing challenges	-	5	-	7	-	9	-	9	-	3	
Adele	Good egg layers	-	9	-	9	-	5	-	5	-	5
	Tolerate or adapt to bad weather conditions	9	-	7	-	8	-	10	-	-	-
	Fast growth rate	10	-	10	-	5	-	5	-	-	-
	Good behaviour	7	-	8	-	8	-	10	-	-	-
	Big body size	10	-	10	-	4	-	6	-	-	-
	High amount of meat	10	9	10	8	5	5	4	5	-	6
	Do not cannibalize each other	7	7	10	6	5	7	5	7	-	5
	Preferred in the market	7	8	8	9	10	5	10	6	-	5
	Good scavenging ability	5	4	8	5	8	10	10	10	-	4
	Eggs are preferred in the market	6	-	7	-	10	-	10	-	-	-
	Knowing their shelter and their feeding and watering place	5	-	4	-	8	-	8	-	-	-
Adapt to other birds in the house	-	5	-	6	-	8	-	10	-	3	

Village	Preferred trait	Koekoek		Sasso RIR		Horro		Local		Kuroiler	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	Good feather colour	-	7	-	9	-	6	-	7	-	4
	Lay eggs in a good place	-	5	-	7	-	8	-	9	-	7

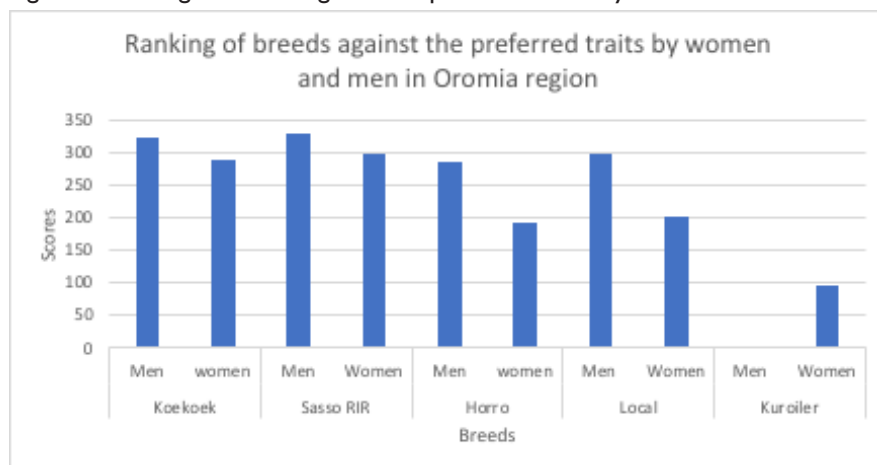
Aneno Shisho	Trait	Koekoek		Sasso RIR		Horro		Local		Kuroiler	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	Good egg laying habit	6	7	8	9	4	1	4	1	-	-
	Big eggs	7	6	7	7	3	0	2	0	-	-
	Feeding habit	6	6	5	7	5	4	6	3	-	-
	Behaviour	5	6	6	7	4	3	5	4	-	-
	Growth rate	8	7	7	5	3	2	3	2	-	-
	Meat yield	-	8	-	6	-	2	-	2	-	-
	Preferred in market/ good market price	5	6	9	5	2	3	6	4	-	-
	Ability to escape predators	4	-	5	-	8	-	8	-	-	-
	Overcoming challenges	4	-	5	-	7	-	8	-	-	-
	Water drinking habit	-	4	-	6	-	3	-	2	-	-
	Survivability rate	-	5	-	4	-	6	-	7	-	-
	Tasty meat	-	6	-	5	-	3	-	4	-	-

Bake Sirba	Trait	Koekoek		Sasso RIR		Horro		Local	
		Men	Women	Men	Women	Men	Women	Men	women
	Egg laying/good layers	8	5	8	6	1	3	2	2
	Behaviour	6	3	5	5	3	2	4	3
	Growth rate	7	7	5	5	4	2	2	1
	Meat yield	9	7	8	4	2	1	2	2
	Price in the market	-	6	-	5	-	2	-	2
	Tasty meat	7	5	7	4	4	3	5	4
	Big eggs	8	4	7	5	2	1	1	0
	Good feather colour	9	-	7	-	6	-	3	-
	Good adaptability	6	-	7	-	7	-	8	-
	Ability to overcome disease	5	-	5	-	7	-	7	-
	Ability to scavenge	5	-	4	-	7	-	8	-
Total score		70	37	63	34	43	14	42	14

Oda Laku	Trait	Koekoek		Sasso RIR		Horro		Local	
		Men	Women	Men	Women	Men	Women	Men	women
	Good feather colour	9	-	7	-	6	-	3	-
	Good growth rate	7	7	5	5	4	2	2	2
	High amount of meat	9	8	8	6	2	2	2	2
	Big eggs	8	6	7	7	2	0	1	0
	Good adaptability	6	-	7	-	7	-	8	-
	Good layers	8	7	8	9	1	1	2	1
	Good behaviour	6	6	5	7	3	3	4	4

Oda Laku	Trait	Koekoek		Sasso RIR		Horro		Local	
		Men	Women	Men	Women	Men	Women	Men	women
	Ability to overcome disease	5	-	5		7		7	
	Ability to scavenge for any available feed	5	6	4	7	7	4	8	3
	Water drinking habit	-	4	-	6	-	3	-	2
	Survival rate	-	5	-	4	-	6	-	7
	Good market price	-	6	-	8	-	1	-	1

Figure 5. Ranking of breeds against the preferred traits by women and men in Oromia region



Changes in trait preference and chicken production over the past 10 years

The women and men in Oromia region have observed changes in chicken production over the past 10 years. There is a positive change in trait preference by chicken producers due to the introduction of improved chicken strains. Chicken producers have started selecting productive chickens that lay eggs daily and that are big in body size. The men also recognize changes in the chicken market, with increased demand for chicken and eggs and an increase in the price of chicken and eggs

Currently there is high demand for chicken and chicken products and the price of the chicken and chicken products is increasing. The market has changed. —Male participants, Biftu Geda village

The changes were attributed to research conducted by EIAR and other organizations and increased awareness about the use and management of chickens. Research centres and agricultural office (development agency) are raising awareness about chicken production. The poultry sector has been expanded everywhere in the country by government and NGOs. There is increased knowledge and skills in managing chickens as a result of training given by the government and other organizations.

Addis Ababa

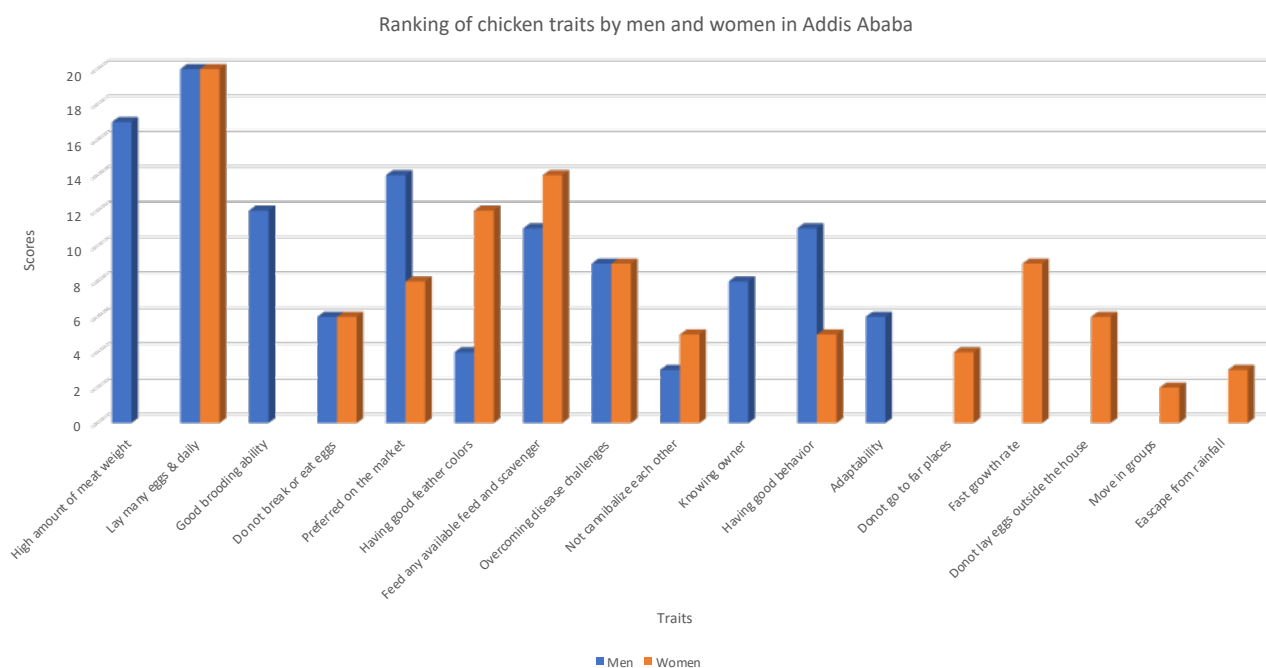
Ranking of trait preferences

Table 9 shows the scores assigned to different chicken traits by women and men chicken producers. Figure 6 shows that overall, the most preferred traits by both women and men are egg laying, ability to feed on any available feed, behaviour and feather colour. Traits unique to men are body weight, brooding ability, adaptability and knowing the owner. Men also ranked market preferences and good behaviour highly as compared to women. On the other hand, women ranked feather colour, ability to feed on any available feed and aversion to cannibalism highly compared to the men (Figure 6).

Table 9. Ranking of chicken traits by women and men in Ertu Mojo and Ketena I in Addis Ababa

Trait	Ranking by village and gender			
	Ertu Mojo		Ketena I	
	Men	Women	Men	Women
High amount of meat/weight	8	-	9	-
Laying many eggs/egg-laying ability/lay daily	10	10	10	10
Good brooding ability	4	-	8	-
Do not break or eat eggs	6	6	-	-
Preferred in the market	7	-	7	8
Good feather colour	-	8	4	4
Feeding on any available feed/scavenging ability	6	7	5	7
Overcoming disease challenges	9	9	-	-
Not cannibalize each other	3	5	-	-
Knowing the owner	5	-	3	-
Good behaviour	6	-	5	5
Adaptability	-	-	6	-
Do not go to far places	-	4	-	-
Fast growth rate	-	-	-	9
Do not lay eggs outside the house	-	-	-	6
Move in groups	-	-	-	2
Escape from rainfall	-	-	-	3
Do not attack other birds	-	-	-	5

Figure 6. Ranking of preferred chicken traits by men and women in Addis Ababa



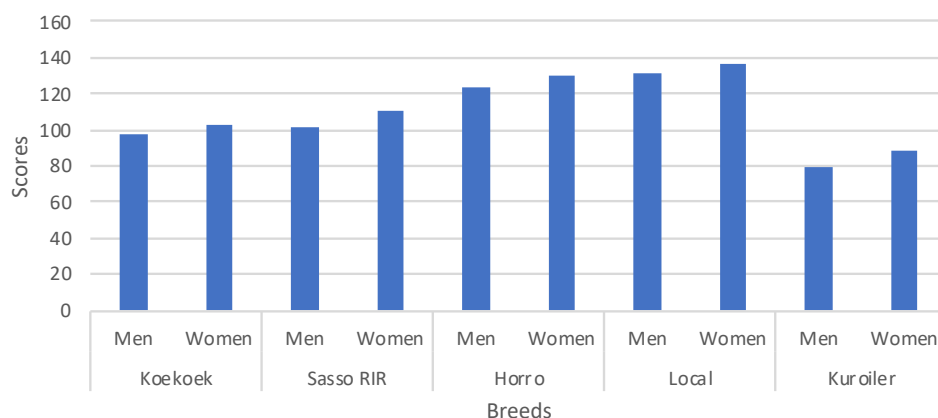
Ranking of breed against traits

Table 10 presents the scores given by women and men to different breeds. Overall, the results show that both women’s and men’s groups ranked the local and Horro as breeds that exhibited the most preferred traits, i.e. good brooding, high market demand, disease resistant, escape predation, good feather colour, the feathers do not fall off and good adaption to the environment (Figure 7). This was followed by Sasso RIR and Koekoek. Sasso and Koekoek are good at laying eggs and have good body weight but the mortality rates are high. Traits to improve according to the men and women in Addis Ababa include disease resistance, egg production, adaptability to environment and feed shortages, and meat yield.

Table 10. Scoring of chicken breeds against the preferred traits by women and men in Addis Ababa

Village	Preference	Breed									
		Koekoek		Sasso RIR		Horro		Local		Kuroiler	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Ertu Mojo	Preferred in the market	6	-	8	-	9	-	9	-	5	-
	Feed together	7	-	7	-	8	-	10	-	6	-
	Good at brooding eggs	1	-	1	-	10	-	10	-	1	-
	Daily laying of eggs	9	8	10	10	5	5	5	5	7	7
	Quality meat	8	-	8	-	8	-	9	-	7	-
	Escaping from predators	4	-	3	-	8	-	10	-	4	-
	Feathers not easily removed	5	-	5	-	9	-	10	-	3	-
	Good weight	10	-	7	-	4	-	5	-	6	-
	Disease resistance	4	4	5	5	9	8	9	10	5	4
	Early start laying eggs	5	-	8	-	0	-	0	-	5	-
	Do not go far from home	-	5	-	6	-	7	-	8	-	4
	Know their owner	-	4	-	5	-	8	-	9	-	4
	Do not cannibalize	-	8	-	8	-	8	-	9	-	7
	Good feather colour	-	5	-	8	-	9	-	10	-	3
Good scavenger	-	9	-	7	-	9	-	9	-	6	
Do not break/eat eggs	-	6	-	5	-	9	-	9	-	5	
Ketena I	Fast growth rate	9	9	7	7	4	4	4	4	7	7
	Good layers	7	7	9	7	6	5	5	6	6	5
	Good adaptability	5	-	7	-	9	-	9	-	5	-
	Brooding or egg-hatching ability	1	-	2	-	10	-	10	-	1	-
	Preferred in the market	4	5	7	7	10	10	10	10	4	4
	High amount of meat and quality meat	10	-	7	-	5	-	6	-	6	-
	Fight against predators and escape from predators	2	-	1	-	9	-	10	-	2	-
	Good behaviour	-	7	-	9	-	6	-	5	-	6
	Do not lay eggs outside home	-	4	-	6	-	10	-	10	-	5
	Good feather colour	-	8	-	7	-	5	-	6	-	6
	Move in groups	-	2	-	4	-	9	-	10	-	2
	Good feed consumer	-	8	-	6	-	8	7	7	7	8
Can escape rain	-	4	-	4	-	10	-	10	-	5	

Figure 7. Ranking of chicken breeds against preferred traits by men and women in Addis Ababa



Changes in trait preferences and chicken production over the years

There is a change in chicken production by smallholder farmers due to increased farmer awareness about the importance of chicken. Producers have started selecting productive breeds, preferring chicken breeds with good traits like egg laying and meat yield. The market for chicken and chicken products is attractive when compared with the past although it fluctuates. The changes are attributed to the government promotion of poultry as well as NGOs.

SNNP region

Trait preference

The research team in SNNP did not disaggregate data on trait preference by gender. However, we present the data to give some insights into the preferred traits by women and men poultry producers in SNNP. The preferred traits include fast growth, good feather colour, large body size, large number of eggs, disease resistance, good market for meat and eggs, low feed consumption, tasty meat and brooding.

Table 11. Desired and undesired chicken traits by women and men in the SNNP region

District/village	Chicken breed	Good/desired traits	Bad/less desired traits
Bolosso Sorre (Gido Homba kebele)	Kuroiler	Fast growth, good colour, large size and a large number of eggs, large body size, a good market for meat and eggs	Low disease resistance, swelling of the eyes
Meskan (Mekicho kebele)		Fast growth, doesn't require high labour	Susceptible to predators, low resistance to diseases
Hulbareg (Fuge kebele)		Fast growth, high production, fetch a good price in the market, does not require high labour	Low disease resistance, predators, cannot hatch (brood chicks)
Bolosso Sorre (Gido Homba kebele)	Sasso RIR	No good traits	Low disease resistance, slow growth, low egg production
Meskan (Mekicho kebele)		Does not require high inputs, uniform in colour	Low disease resistance, low egg production
Hulbareg (Fuge kebele)		Fast growth, high production, fetch a good price in the market	Low disease resistance, predators, cannot hatch (brood chicks)
Bolosso Sorre	Sasso (Embrapha)	No good traits	Low disease resistance, discontinue egg laying
Meskan (Mekicho kebele)		Fast growth, does not incur much cost (feeding)	Meat is not tasty, susceptible to predators
Hulbareg (Fuge kebele)		Fast growth, high production, fetch a good price in the market	Low disease resistance, susceptible to predators, cannot hatch (brood chicks)

District/village	Chicken breed	Good/desired traits	Bad/less desired traits
Bolosso Sorre (Gido Homba kebele)	Koekoek	Fast growth, good colour, large number of eggs, large body size, good market for meat and eggs, feed efficient	-
Meskan (Mekicho kebele)		Provide many eggs resistant to diseases adaptable to the local environment	Meat is not tasty, susceptible to predators and diseases
Hulbareg (Fuge kebele)		Fast growth, high production, good colour fetch a good price in the market, can hatch (brood chicks)	Low disease resistance
Bolosso Sorre (Gido Homba kebele)	Horro	Tasty meat	Slow growth, small egg size, fetch a low market price, low market demand
Meskan (Mekicho kebele)		Meat is tasty, lays many eggs, resistant to diseases, adaptable to the local environment	Slow in growth (low in body weight), exhibit broody character
Hulbareg (Fuge kebele)		Colour diversity, disease resistance, can brood and hatch chicks	Low production, low disease resistance, low market demand
Bolosso Sorre (Gido Homba kebele)	Local	Quality meat, escape from predators, brood chicks and protect them from predators, the egg has medicinal value	Small size, low in price, show broody character for a long time without producing eggs
Meskan (Mekicho kebele)		Meat and eggs are tasty, resistant to diseases	Low in production, susceptible to diseases
Hulbareg (Fuge kebele)		Colour diversity, disease resistance	Low production

Ranking of breeds against preferred traits

Similarly, this data was not disaggregated by gender, but it gives us insights into the rating of the breeds against the preferred traits. Based on Table 12 below, Sasso and Kuroiler were rated as the breeds that exhibit the most preferred traits—laying more eggs, fast growth, large body size, and have a good market for meat and eggs. However, the breeds are susceptible to predators, have a low resistance to diseases and poor broody behaviour, all of which are exhibited by the local and Horro breeds. Koekoek has good feather colour.

Table 12. Ranking of breed against preferred traits in SNNP region

District/village	Trait or quality	Rank (1–6, 1=superior, 6=inferior)					
		Chicken breeds					
		Kuroiler	Sasso RIR	Sasso	Koekoek	Horro	Local
Bolosso Sorre (Gido Homba kebele)	Number of eggs	1	4	3	2	5	6
Meskan (Mekicho kebele)		4	3	5	2	1	6
Dara woreda (Kumato kebele)		3	-	1	2	-	-
Hulbareg woreda	Fast growth, large body weight	1	4	2	3	5	-
Bolosso Sorre (Gido Homba kebele)		1	4	3	2	5	6
Meskan (Mekicho kebele)		1	3	2	4	5	6
Dara woreda (Kumato kebele)	Disease resistance	3		1	2		
Hulbareg woreda		4	2	3	5	-	-
Bolosso Sorre (Gido Homba kebele)		2	-	-	3	-	1
Meskan (Mekicho kebele)	Good colour	5	6	2	4	3	1
Hulbareg woreda		-	-	-	-	1	1
Bolosso Sorre (Gido Homba kebele)		-	-	-	1	2	1
Dara woreda (Kumato kebele)	Low feed consumption	-	-	-	1	-	-
Hulbareg woreda		-	2	-	1	-	-
Bolosso Sorre (Gido Homba kebele)		-	-	-	-	2	1
Meskan (Mekicho kebele)		4	6	3	5	2	1
Hulbareg		-	-	-	-	-	-

District/village	Trait or quality	Rank (1–6, 1=superior; 6=inferior)					
		Chicken breeds					
		Kuroiler	Sasso RIR	Sasso	Koekoek	Horro	Local
Bollosso Sorre (Gido Homba kebele)	Tasty meat	-	-	-	-	-	1
Dara woreda (Kumato kebele)		-	-	-	3	2	1
Bollosso Sorre (Gido Homba kebele)	Ability to hatch chicks	-	-	-	-	-	1
Hulbareg		-	-	-	2	1	1
Meskan (Mekicho kebele)	High market demand	5	1	4	6	2	3
Hulbareg woreda		1	4	2	3	5	

Changes in trait preference and chicken production

Similar to the other regions, there has been a change in trait preference and chicken production as a whole, due to the increase in government attention through extension and research, increase in demand for chicken products and improvement in income.

What does this tell us?

The results reveal similarities and differences in trait preference among men and women across the four agro-ecological zones. Overall, the most preferred traits by women and men with slight variations in the order of ranking are egg production, body weight, disease resistance, market preference, uniform feather colour and scavenging ability. Tasty meat and behaviour are highly ranked by women. Categorization of the traits reveals a preference for adaptive, productive and socio-cultural importance, considering the multiple roles of chickens. Although the productive traits are important to address the current global challenges of food and nutritional security, the adaptive and brooding traits will be important in the face of climate change, and the influent structural and market systems.

Ranking of breeds against the traits shows variations among men and women and across agro-ecologies, with women in Amhara preferring Sasso while the men preferred Kuroiler as the breeds with the most preferred traits. In Tigray, the women ranked the local and Horro as the breeds that exhibited the most preferred traits and the same was spelled out by women and men in Addis Ababa. We also notice differences in the ranking of chicken breeds by women and men in Oromia with women ranking Koekoek first while the men ranked Sasso first. But overall, Sasso and Koekoek exhibited the most preferred traits in Oromia, while Sasso and Kuroiler exhibit the most preferred traits in Amhara and SNNP while in Tigray and Addis Ababa, the local breed exhibited the most preferred traits.

This implies that breeders need to incorporate several of the local breed traits into the improved breeds particularly the ability to resist disease, scavenge, brood and feather colour. The desired traits in the improved breeds are the ability to lay numerous and large eggs, good body weight and fast growth rate. These breeds perform differently in the different agro-ecologies, with the local breeds thriving better in Tigray and Addis Ababa, although their performance is poor. For chickens to empower women, it will be important to breed traits with good market demand for them to be able to generate income and accumulate assets. However, women need to recognize themselves as actors in the poultry value chain and see themselves as agents in mobilizing actions in order to achieve their desired goals. Women need to understand themselves in order to be understood by other actors within the value chain and its surrounding environment.

Recommendations to improve chicken production and empower women

From poultry producers' perspectives:

The government needs to develop a cold chain to increase access to poultry vaccines in remote areas in order to overcome disease challenges.

- Improve availability and access to improved chicken breeds (day-old chicks) by women and men.
- Develop the poultry veterinary system including developing the capacity of vets to offer poultry health services.
- Regularly train chicken producers on poultry management—feeding, low-cost feed preparation and disease management, among others.
- Develop poultry input and output markets to increase the sale and consumption of poultry products, but also create employment for women and young people.
- Develop the capacity of community members particularly women and youth to offer vaccination services.
- Improve availability and access of poultry feed at district and kebele levels.
- Improve production potential especially egg and meat production as well as the ability of birds to convalesce from disease

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Annex

ACGG intervention areas and selected sites

Region (sub-national area)	Name of district (woreda)	Village (kebele) name	Selected village	Remarks
Oromia	Adami Tulu	Anano Shisho	Anano Shisho	The culture in the two districts is almost the same so we selected one village.
		Garbi Gilgile		
	Dugda	Bulbula		
		Shubi Gamo		
		Sera Wakale		
	Bako Tibe	Bekele Girisa		The districts are adjacent to each other, so we selected one village.
		Tulu Sangota		
		Oda Haro		
	Dano	Tarkanfata Gibe		Bake Sirba
		Karora Jibat		
Haromaya	Bake Sirba	Adele and Biftu Gada	Selected two villages.	
	Abe Dorani			
	Adele			
Darolabu	Biftu Gada	Oda Laku	Selected one village.	
	Haka			
South Achefer	Sororo	Lihudi	Selected one village.	
	Chafe Hara			
	Oda Laku			
Amhara	Banja	Lihudi	Lihudi	Selected one village.
		Ashuda		
	Fageta Lekoma	Dikuli	TSION Teguaze	Selected one village.
		Bata Ambe		
		Senkessa		
Gondar Zuria	Surta	01-Addis mender	Kalu is quite distant from the rest of the districts so we selected one village.	
	Amesha Shinkuri			
	Gafera			
Kalu	Sigilada Awuna	021-Arabo		
	Tsion Teguaze			
	Miniziro			
	Chinchaye Degola			
	025-Adane			
	01-Addis mender			
	021-Arabo			

Region (sub-national area)	Name of district (woreda)	Village (kebele) name	Selected village	Remarks
Tigray	Kelteawlalo	Tahtay-Adiksanded	Hayelom	Selected one village.
		Mesanu		
	Saharti Samre	Hayelom	Metkellimat	Selected one village.
		Gijet		
Tahtaymachechew	Metkellimat	Metkellimat	Selected one village.	
	Hadush Adi			
Merebleke	Hadush Adi			
		Mhqan		
SNNP	Dara	Kumato	Kumato	Selected one village.
		Loya		
	Bolosso Sore	Abera Atila	Gido Homba	Selected one village.
		Dubo		
Meskan	Gido Homba	Mekicho	Selected one village.	
	Sore Homba			
Hulbareg	Jole I			
Addis Ababa	Doyogena	Bati Futo	Gomora Zawada	Selected one village.
		Mekicho		
	Kolfe W.3	Fuge	Ketene 01	Selected one village.
		Ambricho Ginba		
Nefassilk W.I	Demeke	Ketene 01	Selected one village.	
	Ancha Sedicho			
		Gomora Zawada		
		Ketene 01		
		Ketene 08		
		Ketene 09		
		Lebu Mekanisa	Eritu Mojo	Selected one village.
		Eritu Buri		
		Eritu Mojo		
Total number of selected villages			16	

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