Do Traditional Food Commodities Transform Food Security? Evidence From Indigenous Knowledge in West Part of Ethiopia

Hika Wana (wanahika@gmail.com)  
Wollega University

Gezahang Kudama  
Wollega University

Research Article

Keywords: Traditional food commodities, Indigenous knowledge, food security, nutrition value, environmental sustainability, Ethiopia

Posted Date: June 9th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-1687653/v1

License: © This work is licensed under a Creative Commons Attribution 4.0 International License. Read Full License
Abstract

This article describes the role of traditional food commodities in transforming food security in the west part of Ethiopia. The study used both secondary and primary data to identify the types of traditional, indigenous, and cultural foods in the areas. The descriptive result revealed that Dinnicha Oromoo, Abbaa Coomaa, Qoccoo, Caccabsaa, Mushroom, Qoc-qocaa, Ancootee, and Goodarree were the indigenous food commodities found and widely consumed in west Oromia. Though these foods are cheap and low cost in the areas, they have not yet been well utilized due to low peoples’ perceptions towards these foods termed as ‘food for poor’ since they consider it as inferior goods. Moreover, lack of awareness, poor policies that recognize their contributions in improving food availability, and lack of promotion to promote traditional and indigenous foods are determinants in the area. The paper also describes the integration concept between modern technology and indigenous knowledge to rise food security status. Traditional and indigenous food systems once lost are hard to recreate, underlining the imperative for timely documentation, adaptations, compilation, and dissemination of diminishing knowledge of indigenous foods, biodiversity, and the use of food culture for promoting sustainable and secured diets. Therefore government, extensions, and all stakeholders should give high consideration to promote such foods and create awareness on their importance to solve food security problems in the study areas and Ethiopia at large. Let Ethiopia recovery come to tell new development.

Introduction

The world is expecting in producing more amount of food to answer the question of food security problems. In developing countries, the population number is increased by increasing rate while land, water, and other inputs are stagnant.(Ponge & Hall, 2011). Even though different amendments were taken to combat the global hunger problem, food insecurity and the problem of nutrition security remain serious challenges in many countries. (Massresha et al., 2021). The price of food resources is highly skyrocketed in sub-Saharan Africa and this inflation affects especially the poor peoples because they are spending their limited incomes on the foods they need. Indeed, FAO attempts to recognize the possible amendments to achieve food demand through diversification, intensification, and improving agricultural yield (FAO, 2014)

Traditional foods and diversified nutrients in the ecosystem have been recognized as the sources of diets and healthy benefits (Ghosh-Jerath, Singh, Magsumbol, Kamboj, & Goldberg, 2016). However, despite this, utilization of traditional foods has decreased due to the ignorance of the potential of these foods in the current commercialized and globalized markets and constraints in research and development (Kuyu CG and Bereka TY, 2020). In developing countries and some Asian Pacific problems; Lack of knowledge and information, lack of awareness, poor policies in integrating these foods for food security, nutritional value, poverty alleviation and health, and lack of advocates in promoting traditional and indigenous foods are some of the constraints. This leads to no or little attention being given to traditional and indigenous food systems. Hence, there is a need to refocus, timely training and advising, compilation and dissemination of diminishing knowledge of on the use of this vital food for ensuring sustainable diets, promoting indigenous food for food security, alleviating hunger, malnutrition and protecting the environment(Tadesse et al., 2020).

Many articles were also witnessed that Ethiopian traditional foods have a great role in preventing diseases. For instance, the consumption of Injera as a staple food contributes to the prevention of many diseases like anemia, obesity, bone disease, and diabetes. According to Bultosa and Taylor (2004), the proximate composition (dB) of
Tef is reported to be 9.4–13.3% protein, 73% carbohydrate, 1.98–3.5% crude fiber, 2.0–3.1% fat, and 2.7–3.0% ash. It is rich in calcium, iron, and protein, and possesses an impressive set of amino acids. Furthermore, its sodium, saturated fat, and cholesterol contents are low as compared to other cereals (Kuyu, 2020).

Ethiopian agriculture is unstable. Cereals are stapled in Ethiopia and consumed in the majority of households. But cereal alone does not prevent severe hunger. Although many traditional food commodities are available, people's demand for such diets is very low in Ethiopia (Agidew & Singh, 2018). For instance, in west Oromia there are many traditional foods which consumed locally by endogenous people like; Koch-kochaa, Sameta, Anchote, Cumboo, Beddee, Caccabsaa, Oromo potato, Qocoo, Goodarree, Mushroom, Buqqee(pumpkin), Raafuu(cabbage), Phorage, Abbaa Coomaa (Lima bean) and booka. However, these low-cost and high-value foods are not taken into high consideration though they are very essential to improve food security. Therefore, to overcome the problem of hunger it's better to see the significant factors that tackle traditional foods in the study area. Hence, this article was attempted to investigate indigenous/local knowledge, encompassing all aspects of traditional food commodities, from cultural beliefs to utilization. to identify the type of traditional foods and its utilization, and their importance in the current agricultural production in Wollega zones. Sustained integration between modern and indigenous knowledge were also discussed for further policy recommendation in the study area.

**Empirical Evidence**

Empirical evidence is the best framework for strengthening the research outcome. For instance; to recommend traditional food commodities for the daily food system, the empirical framework provides better support. This article is highly dependent on the western part of Oromia traditional food and will recommend for adaptation in all areas of the country.

Balcha Abera Erena, 2018, conducted a study on 'Promoting Neglected and Underutilized Plant Species for improved Food Security' in southwest Oromia, Ethiopia. According to his finding, around 71 neglected and underutilized crop plant species were reported. From these, 18 plant species were domesticated under home gardens while the remaining species were under wildlife. He has also identified traditional vegetables; Anchote (Coccinia abyssinica), Dinnicha Oromoo (Plectranthus edulis), Abbaa Coomaa (Phaseolus lunatus L.), and heppoo(Vigna unguiculata) were identified in the study area as "most appreciated" in cultural feeding of the rural community at large. Godarree(Colacaceae esculenta L.Schott), and Qocoo Oromoo(Dioscorea alata), were the most common and drought-resistant tuber crop plants identified with very high significance values. The findings of the study revealed the establishment of small and medium enterprises to increase the value of neglected and underutilized plant species in the region (Neglected, 2018).

A paper from Mongolia addressed; the indigenous people consume many types of wheat, plants, wild onions, mushrooms, nuts, and forest berries. Blueberries, cranberries, and strawberries were also wild berries they consume by the forest. However, despite this, land degradation, climate change, and deforestation have resulted in the distorting availability of these foods. This resulted in deficiencies in nutrients, especially among children and women. Hence, their sustainable conservation is crucial, especially in the context of climate change (FAO,2014). In Ethiopia, there are also several indigenous knowledge that was passed through ancestors of the land, i.e., through father and grandfather but overlooked in today's episode. Therefore, it is undisputed that ignoring the local practice and rejecting indigenous knowledge are the wrong turns in food security patterns. Hence integration is advisable in enhancing food and nutrition security in Ethiopia.
Methodology

The study was used both primary and secondary data. The primary data was collected from the traditional food farmers while the secondary data was gathered from the agricultural office, published and unpublished documents. The snowballing technique was employed to get the target samples. The method followed throughout this study is qualitative and descriptive in nature. The remaining part of this study is structured as follows. After briefly introducing the important existing traditional food commodities for justification of local knowledge in the study area, Section two describes the documentation of the names and its availability of the indigenous product. Section three describes the details on prioritization, and the fourth step was assessing the factors that affect the production of local/traditional food commodities through focus groups and the elders. The study was conducted in Western Ethiopia; Ilu labor, Jima, and four zones of Wollega (Kelem, west, east, Horror Guduru).

Data source and analysis

The study identified different sources of indigenous knowledge and practices on traditional food commodities. The main sources were interactions with the elderly, parents, grandparents, relatives, and friends. Other sources are farmers and the local market area. Agricultural office, extension workers, and own eye witness were also supplementary sources of data for this study. Though food security is measured scientifically by scales, such as the household Food insecurity and Access Scale (HFIAS) and daily calory intake, this article aims to document the qualitative aspects of the indigenous knowledge on traditional food commodities by the local peoples to contribute to household food security.

Discussion

Food Production and Indigenous Knowledge in Ethiopia

Most of the agricultural farming system of Ethiopia is based on traditional mood. Farmers sacrificed more to produce local crop landraces. These crops are fit into the traditional customs of the local peoples. For instance, teff is an indigenous cereal crop to Ethiopia. It furnishes the flour for enjera and sourdough pancake-like bread that is the principal form in which grain is consumed in the area. barley is used as food and in the production of Stella, a locally produced beer while wheat is cooked and eaten as it is and also furnishes the flour for preparing bread. Pulses are the most important element in the national diet and a principal protein source. They are boiled, roasted, or included in a stew-like dish known as wot, which are sometimes the main dish and sometimes a supplementary food major pulse crops grown in the country are chickpea, haricot beans, lentils, faba bean, and peas (Bishaw and Wubshet, 2020)

Indeed, an adaptation of indigenous knowledge on the crops from one place to another and the need to maintain and develop cultural diversity of the country. Moreover, several participants pointed out that a knowledge system is most often specific to a particular physical, economic, and cultural environment. Traditional knowledge is embedded in a given socio-cultural environment. This implies that it is difficult to transfer location-specific knowledge from one place to another. Further, it was stressed that questions of property rights and markets are relevant to the transfer of knowledge. However, it’s advisable if research centers and national universities adopt and create awareness in production, storing, marketing, consumption of these traditional food items to stabilize the current food price inflation in the study area, Ethiopia at large.
Traditional foods in West Oromia

Oromo Traditional foods consist of various vegetables or livestock products. In west Oromia, there are different types of cultural cuisine that peoples use at different times. Some of the traditional food commodities in the study are, Qoc-qocaa, Goodarree, Ancootee, Marqaa, Caccabsaa, Cumboo, Cuukkoo, Cororsaa, Qoccoo Oromoo, Dinnicha oromoo, Foon Waaddii, Baaduu, Hulbata, ittoo, buddeena, Qincee, Qorsoo, booka, and Farsoo. Qoccoo Oromoo is not the Gurage type of kocho but a different kind; Farsoo is sometimes called local beer in the area. (Ethiopia special Cuisines, 2020). Lima bean (Abbaa Coomaa) is also one of the underutilized traditional foods in wollega area.

Determinants of Traditional Food Commodities

Perception of Household

Indeed, rural households have been harvesting more production using modern agricultural technology than indigenous landraces which have less profit, low productivity. However, despite this, cultural foods could be soundful for sustainable agriculture through integration with technology like agroforestry practice. Other factors are the growing ignorance among young people about the existence of these nutritionally-rich food plants. For instance, Jijimbila(ginger), Ogi’oo(cardamom), and Hirdii(turmeric) are the best examples of traditional spices; Oromo potato, Godarree, and Qocho are cultural tubers found in the study area. Lima bean and mushroom are also the most important plant product in wollega area. Though these all-nutrient rich agricultural products are easily available, most people perceive them as ‘food items for the poor’s in west Oromia While Counterally, wild ginger, insects, and herbs have been used as delicious food, preventing disease and improving the cognitive function of middle-aged women in Thailand (Bioversity, 2011). Therefore, internalizing empirical research and improving extension service is recommendable to enhance food security. In addition to this gap, it would be better if the nutritional value of indigenous food could be considered for the healthy of households in the study area.

Extension and Rural Development policy

In Ethiopia, a great focus is given to improving cereal production and known vegetables. Rural Development policy is also focused on the productivity of livestock and crops in Ethiopia. Traditional foods are overlooked by the agricultural sector in the country. Lima bean is the most leguminous delicious food item which has been known in Madagascar, in west Oromia it has been also a cultural legume. It is stapled crops for thousands of people in west Oromia but it is undermined and poorly considered in other regions of Ethiopia. Similarly, the Oromo potato is a neglected crop in other parts of Ethiopia but produced and consumed by producers of west Oromia. This indicated that there is no extension service and rural development policy specifically for this purpose. Therefore, to confirm the sustainability of the ecosystem and food security it would be good if a sound policy that inculcates cultural and indigenous food commodities will be implemented in Ethiopia.

Lima bean (Phaseolus lunatus L.) is generally a hardy species suitable to low altitude, humid, and sub-humid tropical climates, although it can be grown in a wide range of ecological conditions (Freytag et al., 2002). Lima bean is found from sea level up to altitudes higher than 2000 m. It is usually found in warm temperate zones as well as arid and semi-arid tropical regions. It is a pulse crop usually grown for its enlarged seeds (IBI,2012) and cultivated primarily for its immature and dry seeds (Van der Maesee, 1989). Lima bean is an important source of protein and vitamins and has the potential to alleviate malnutrition in rural areas. The crop is also an important source of income, particularly for resource-poor smallholder farmers and traders.
Lack of Promotion

Though traditional food commodities are consumed highly in the rural area and integrated socio-cultural among communities, their further advocacy is important to create awareness for the mass population on their benefit. However, there is no such scheduled promotion found in Ethiopia and west Oromia in particular. Therefore, it's better if all stakeholders will advocate the importance, practice, and indigenous knowledge of traditional food commodities that will result in nutrition and food security in the study area. Indigenous foods, neglected and derided by many in the agriculture and food industries as well as by urban consumers, can be an important component in alleviating hunger, malnutrition, and protecting the environment (Keantinge, et.al, 20−12).

Additionally, Traditional communities living in rural areas have conserved traditional knowledge but this is disappearing with transitional societies. There is a need for documentation, conservation, and promotion of traditional knowledge for biodiversity conservation, otherwise, this will be lost and difficult to recover. In Oromo people; many foods are served as ceremonies, funeral religious, culture and enjoyment and pleasure purposes. For example; Marqaa has been consumed highly during childbirth. Ancootee is also consumed during Masqalaa celebration. Similarly, Koch-kocha, Caccabsaa, Cumboo, and Marqaa are a few food items utilized by local peoples but have not yet been advocated by various government organizations.

Integration of Indigenous knowledge for Food Security

Shepard (1998) postulate that Food security does not depend on crop production alone whether at household, region, or country level. It depends to a greater extent on people's capacity to own the resource to get the food they need. The major challenges, however for crop production lie in the farmer's use of high levels of chemicals, reduced diversity of cropping systems, disregarding livestock, and controlling the nature to a high degree. In Ethiopia extension workers advise farmers to use modern agricultural production methods like planting in rows, improving seeds, and diversifying their production by growing cash crops such as coffee and sesame. Some producers also explained that modern technologies are crucial for increasing productivity and income improvement. In another case, in west Oromia local people use various traditional methods in crop production. For example, crop rotation and intercropping mechanisms restore the fertility of the soil and increase productivity. hence, farmers need all aspects of modern agriculture and indigenous knowledge that solve farmers' challenges, to be integrated. From this viewpoint, it's better if Ethiopia's agricultural policy will possess both modern and indigenous/local know-how to confirm food security status in the country. This is in line with (Awuor, 2013).

Sustained use of traditional food commodities for food security

Even though the increased impact of modern agriculture and development changes, some traditional management and knowledge system are still predominant. These systems exhibit important variables of sustainability. For example, leaf of lima bean is used to heal trachoma while its bean is used for both foods item and increasing soil fertility. Many farmers felt like sharing such indigenous knowledge use must be promoted in all farming practices. This was expected to allow those who know more about local knowledge to share what they know with others especially for some diseases and pests where modern techniques are not known or readily available. Most farmers using locally available resources for their livelihood are poor and need support to improve on the existing traditional food commodities. Many farmers were even optimistic that they would continue using indigenous practice because they hope to continue growing the same crops and keeping the same livestock using the same practice (Chala and Tizazu, 2019)
From this study, it is understandable that modern technologies are effective in terms of mass production at the national level and as well as for private farmers. In another case, the study acknowledges that modern technologies are expensive for the majority of farmers. Although modern technologies can effectively respond to contemporary demands and challenges, the adoption rate was slow due to a lack of awareness and capital for acquisition and maintenance. Modern techniques in most cases were reported to be imported and thus unreliable due to lack of originality. Therefore, it's undisputed that sustained modern technologies and indigenous knowledge, and integrated traditional food commodities will answer the question of food insecurity raised by peoples of the country.

For clear understanding and to make inclusive, edital discussion regarding traditional and indigenous foods were made in local language called 'Afaan Oromoo' that is widely spoken throughout the country and the mother language in the study area. Types of indigenous food, definition, and description were made as follows to make it easy for the readers and indigenous peoples.
Conclusion And The Way Forward

Agricultural production in Ethiopia is not stable as can be evidenced by the simple fact that there were recurrent food shortages in the country. Cereal productions are there in Ethiopia and consumed by the majority of the households. However, cereal alone does not prevent severe hunger. Although many traditional food commodities...
are available, people’s demand for such diets is very low in Ethiopia. In west Oromia, there are various traditional food commodities like Koch-kochaa, sameta, anchote, cumboo, beddee, caccabsaa, oromo potato, kocho, Goodarree, mushroom, buqee (pumpkin), raafuu (cabbage), porridge, Lima bean and booka. These foods are low cost in production and ecofriendly but have not yet well utilized. Peoples in the areas perceive traditional food as ‘Geffen good’ because when their income increase, the quantity demand for this food decrease. Lack of appropriate scientific information, low perception towards traditional indigenous foods (termed ‘foods for poor’), poor agricultural policies towards these foods in food security and health, and lack of advocates and champions to promote traditional and indigenous foods are determinants affecting traditional foods in the study areas. Indeed, Indigenous people living in rural areas possess food resources that are usually not completely understood by agriculture and health sectors. Similarly, extension and rural development policy in Ethiopia also have not yet inculcated about traditional food production. Hence, this work tried to identify the items of indigenous foods, determinants and attempted to forward the recommendation through an integration mechanism in the study area. Therefore, awareness creation, encouraging indigenous knowledge, adaptation, and expansion of these foods, promoting the contributions of traditional and indigenous foods for enhancing food security, integrating both modern agricultural technology and indigenous knowledge are the best way for sustainable food and environment in the study areas.

**Declarations**

**Acknowledgement**

In our first place let us give great thanks to Almighty God/Allah. Next, Wollega University is great fully acknowledged for rendering great services like internet and moral assistance in conducting this study. This original article contains information gathered from primary and numerous published resources, and thus, we would like to acknowledge all contributors for the birth of this article and the references used in this manuscript.

**Conflict of Interest**

There are no conflicts of interest to disclose.

**Authors Contribution**

Corresponding author, Hika Wana (idea creator, writer and forward the results) and Gezahagn Kudama on his side (collecting data, participating in conclusion),

**Declaration Statement**

We declare and affirm that this article and the overall processes of the study were completed without any obstacles. Any scholarly matter that is included in the manuscript has been given recognition through citation. We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

**Consent for Publication**

Not applicable

**ORCID:** Hika Wana Fufa https://orcid.org/0000-0001-7863-6824
References


Figures

Figure 1

Map of the study area
Figure 2

Qoccoo in west Wollega Dinnicha Oromoo (known as Oromo potato)

Figure 3

types of Abbaa Coomaa (Oromo lima beans) in west Oromia, Ethiopia.
Figure 4

indigenous food (*Qoc-qocaa and Caccabsaa*)