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Women's Indigenous Knowledge and its Contribution to Sustainable Livelihoods: the Case of African Indigenous Vegetables in Kenya

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Abstract

This paper aims at demonstrating the important role of indigenous knowledge and its contribution to sustainable livelihoods through an investigation of the African Indigenous Vegetables (AIVs) value chain from a gender perspective. AIVs are a woman's crop and as such they have indigenous knowledge which they pass on orally and practically regarding the production, preparation, preservation and uses of AIVs.

This knowledge is in danger of being lost if not well preserved and disseminated especially because of increased commercialisation of the AIVs value chain, the loss of the women's share, rural urban migration, and the emphasis on cash crop production. This paper presents the findings of the HORTINLEA subproject "Gender Order: Embedding Gender in Horticultural Value Chains to Close the Productivity Gap."

The results are based on field research carried out in the rural, peri-urban and urban areas in Kenya. The research employed the use of qualitative methods of data collection such as semi-structured in-depth interviews and focus group discussions with male and female farmers, traders, and respondents from NGOs, research organisations and Government. Qualitative content analysis was carried out using MAXQDA software.

The results demonstrated that women have knowledge on AIVs varieties, seed bulking, production processes, medicinal values, ecological sustainability, social networking and methods of AIVs preparation and preservation that contribute to food security and sustainable livelihoods for their households and communities.

The paper therefore seeks to discuss methods of oral knowledge preservation and dissemination by universities and policy innovations that can be made by decision makers to make visible the important indigenous knowledge contribution of women to food security.

Keywords: African Indigenous Vegetables (AIVs), Gender, Indigenous Knowledge, Sustainable Livelihoods and Policy Innovations, Women

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Introduction

Although gender relations and value chains are socially embedded (Barrientos, 2001, 2003) gender analysis is often overlooked in value chain analysis. An examination of the African Indigenous Vegetables (AIVs) value chain from a gender perspective demonstrates which individuals are included and excluded from participation, benefits and opportunities (Joekes, 1999). Such an analysis further identifies inequalities and opportunities for gender sensitive interventions that would enable both men and women to benefit from the production of AIVs. African Indigenous Vegetables (AIVs) e.g. leaf amaranths (*Amaranthus* species), spider plant (*Cleome gynandra*), African nightshades (*Solanum* species) are regarded as a woman's crop and as such women have indigenous knowledge regarding the production, preparation, preservation and uses of AIVs. This knowledge originates from intellectual insight of the traditional context that includes daily life experiences, know-how, skills, innovations and practices. It is further based on a system that is passed down from one generation to another, and in the case of AIVs the knowledge is passed down from mother to daughter, both orally and practically. This knowledge system contributes towards food security and sustainable livelihoods as it contains insights on plant diversity, agricultural practices, nutrition and medicinal uses and environmental management.

Women produce AIVs for household consumption and sale. The income accrued from the sale of AIVs is used by women to meet their practical and strategic needs. Although women play a vital role in food security, household nutrition and health their contribution is often overlooked, invisible, and undervalued (Noortje Verhart and Rhiannon Pyburn, 2010). It is therefore important to examine the indigenous knowledge that women hold and the role it plays in food security and sustainable livelihoods.

Material and Methods

The data presented in this paper is part of the research findings of the HORTINLEA subproject "Gender Order: Embedding Gender in Horticultural Value Chains to Close the Productivity Gap." The research design was both descriptive and analytical and the research sites were Kakamega (rural), Kiambu (peri-urban) and Nairobi (urban). The methodology was qualitative as it involved carrying out research from women's perspectives and differentiating between men and women's experiences. The sampling method was purposive and consisted of 80 respondents including small scale producers, traders, supermarkets, experts from NGOs, academia, research institutions, Ministry of Agriculture, County and National Government officials. The methods used to collect the data were observation, focussed group discussions (FGD) and unstructured interviews. The data that we collected was transcribed and analysed using the MAXQDA software. For the analysis of the data we developed descriptive and analytical codes from the SLA framework (Okali, C., 2006), Molyneux Maxine (1985) on practical and strategic needs and Nalia Kabeer (1991, 1994) on Intra-household decision making.

Results and Discussion

Agriculture is the backbone of most of the economies of the developing countries in Africa. More than 50% of those who engage in small scale subsistent agriculture are women and they produce about 60-70% of the food in sub-Saharan Africa (Gawayya, 2008) although have limited access to and control over assets and natural resources. This makes them particularly vulnerable to risks, shocks and stresses that occur due to the external environment. Despite these challenges, women have demonstrated that they are not passive victims but active agents who sustain their livelihoods by using indigenous knowledge for food security and to sustain their livelihoods. Women possess indigenous knowledge on AIVs varieties, technologies like seed bulking, drying, production processes, food preparation and preservation, medicinal values, ecological sustainability including exploitation of natural resources, weather systems, climate change and

environmental knowledge. Further, women rely on social support of informal networks and social protection from the community to have access to and control over assets and resources.

Women use this indigenous knowledge of AIVs to increase incomes and reduce poverty. The indigenous vegetable market provides one of the few opportunities for poor unemployed women to secure a livelihood (FAO, 2005). A female respondent stated that: *“I started planting AIVs because of the many responsibilities I had. When you have your vegetables, you can harvest them, sell and get some money for household use, paying school fees, for self-reliance instead of being dependent and for business, and roundtable banking. I have even opened a makeshift kiosk through capital from the vegetables.”*(Interview, Female Producer, Kakamega). Increase in incomes therefore allows women to make decisions, have control over their lives and gives them choices on how to manage their household and community nutrition and well-being.

Women increase their access to and control over resources in the rural and peri-urban areas of Kenya by forming producer groups where they lease land, hire labour to assist in AIVs production and social reproduction. They also increase their capabilities by attending group trainings offered by NGOs, extension workers and other stakeholders where they increase and share their knowledge.

Degradation and climate change further magnify inequalities between men and women (Agostino A. and Lizarde, R, 2012). Since the Horn of African region often faces famine and drought it puts households at risk because agriculture is largely rain fed, women therefore produce AIVs as emergency crop. One of the respondents commented that: *“Sometimes water is also a challenge during dry season, unless you get land near the river accessing water is difficult. So, during the dry season we only produce AIVs on a small piece of land that we can manage to water in the evening to avoid it from drying up.”*(Interview, Female Producer, Kakamega). Women also engaged in livelihood adaptation and vulnerability resilience through managing climate change by leasing land near river banks, using irrigation for AIVs production, and by producing different AIVs varieties and contributing to diversification.

Women’s indigenous knowledge is however in danger of being lost because of its oral and practical nature. The problem is further compounded by the invisibility of women’s knowledge. This is because gendered knowledge is often unnoticed and women are often misinterpreted or devalued by science since their ways of knowing are not appreciated.(Rocheleau et al., (1996). Increased demand for AIVs due to their nutritional and health benefits has led to commercialization which has in turn seen the entry of men into the AIVs value chain which has led to the loss of the women’s share. Other challenges contributing to the loss of indigenous knowledge include rural-urban migration where those in the urban areas have no time to prepare AIVs or lose the know-how after a while. The continuing emphasis on cash crop production by men as opposed to food crops, demonstrates that crops are gendered and may lead to food insecurity. For example, Kakamega has large parcels of private and community land under agricultural production and this is mostly used by men to produce cash crops like sugarcane. To overcome the challenge of sugar cane production women have engaged in inter cropping in the sugarcane plantations to ensure food production as well as establishing kitchen gardens and leasing land for AIVs production.

Conclusions and Outlook

An examination of the AIVs value chain demonstrates that women are active agents who sustain their livelihoods using indigenous knowledge. Indigenous knowledge allows women to increase their assets and capabilities, manage the environment and reduce poverty by changing their status. It is therefore important to address women’s agency and how they redefine their status as this allows us to understand their lives, contribution to food security, sustainable livelihoods and provide opportunities for gender sensitive interventions. The gender of sustainability as seen within the AIVs value chain includes the social, economic, environmental issues and non- market activities and non-monetary values (Harcourt, 2012, 2017)

Since women's indigenous knowledge is oral and practical - and thus easily lost or forgotten - it needs to be collected, transcribed, preserved and disseminated. Research institutions and universities can play a crucial role here by partnering with local communities which can be recognized as "sites of knowledge." The knowledge can be used for local innovations and interventions for community centred development.

Policies like "The Protection of Traditional Knowledge and Cultural Expression"(No. 33 of 2016, Kenya), recognizes the important role of indigenous knowledge but has no enforcement mechanism. Efforts should therefore be made by decision makers and stakeholders to ensure the laws are implemented that lead to structural transformation of the society by providing community security and the protection of indigenous knowledge. This will also ensure that women are not made invisible and their contribution to food security and sustainable livelihoods recognized.

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