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Review article

Gender, smallholder livestock production, improvement and conservation in Africa

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ABSTRACT

Policy makers, developmental agents and researchers are now aware of the need to incorporate gender issues in smallholder livestock production planning and development in order to improve livestock productivity in Africa. This discussion attempt to explore the role of gender in smallholder livestock production,genetic improvement and conservation.Strategies to improve livestock production and conservation within the smallholder livestock sector will not be successful unless gender related issues are taken into account.Ownership of different livestock species by men and women in smallholder livestock production sector has been documented, often cattle and larger animals are owned by men, while goat keeping and backyard poultry production are largely women's domains. Therefore, it is assumed that taking cognizance of gender differentials in smallholder livestock production intervention programs will result in effectively implementation of livestockdevelopment programs ensuring more optimal outcomes. The rationale for gender integration in livestock improvement and conservation is driven by the fact that different household members typically hold different livestock responsibilities; they also may have different livestock priorities and livestock production constraints. Gender sensitive livestock policy initiatives such as training women in livestock improvement and conservation in smallholder livestock production sector should be adopted in order to address specific

concerns and priorities of women as major stakeholders in livestock production. Gendered asymmetries in access to livestock and services not only do a great disservice to women and men livestock smallholder farmers, but they also stifle the potential for more sustainable and effective actions along a given livestock improvement program. In most cases, where livestock improvement and conservation programs are being carried out, the lack of gender consideration constrains the development of holistic approaches to achieve desirable goals

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1. Introduction

Gender relates to socially assigned roles and behaviors attributable to men and women (Muhammad et al., 2012). As keepers of local knowledge on smallholder livestock production and conservation, women and men contribute to the enhancement of gene flow and domestic animal diversity (FAO 2002). Applying a “gender lens” to identify and address women’s and men’s different needs and constraints related to relevant smallholder livestock improvement and conservation is important for determining the most optimal outcomes as well as the most effective use of livestock genetic resources. A number of gender issues are central to discussions of livestock production, improvement and conservation in smallholder livestock farming sector and their implications for small scale resource poor farmers livelihoods. These include, but are not limited to, access to and control of livestock and gendered divisions of labor in livestock production. Although differences, of course, exist within and between different livestock production systems and across regions, women are almost universally recognized for their role as the main actors in poultry, small ruminant, and micro livestock production as well as dairying, including the processing and marketing of milk and milk products (Mugisha, 2007). Increasingly, experience shows (Bravo-Baumann, 2000; Niamir-Fuller, 1994) that women’s labor and responsibilities in animal production remain under recognized and underappreciated by those designing and implementing livestock policies and plans (IFAD 2004). Within a sustainable livelihoods framework, key gender issues currently influencing the improvement and conservation of livestock in smallholder farming sector must be considered in the wider political, economic, institutional, environmental, social, cultural, and demographic context. Hopefully, the discussion will attempt to address the lack of disaggregated information on gender differentials and their implications on livestock improvement programs focusing on their effects on livestock productivity in Africa.

2. Gender and smallholder livestock production and genetic improvement

Specific gender roles, responsibilities, and decision making for different livestock-related tasks have a bearing on the success of smallholder livestock improvement programs. Despite Africa being endowed with different livestock species in the smallholder farming sector, the current livestock productivity is low. Among some of the reasons given for unsatisfactory livestock contribution to the national economies is failure to appreciate the role of women in ownership, livestock labor allocation and decision making in livestock production. Therefore, it is hoped that understanding gender differentials in livestock production will increase the chances of implementation of livestock improvement programs in Africa. The existing gender differentials in livestock production as socio-economic variables used to analyze roles, responsibilities, constraints and opportunities will incentivize household members to fully participate in livestock improvement. Men and women have differing livestock knowledge and skills depending on their roles and responsibilities in smallholder livestock production sector. Women who process wool may have far different criteria for breed selection than men. Men herding cattle may have different knowledge of fodder and disease prevention than others in their household. Men’s and women’s reasons for keeping livestock may differ, as shown in a study conducted in Bolivia, India, and Kenya (IFAD, 2004). In an attempt to improve wool production through cross-breeding Chiapas sheep with exotic breeds, The Institute of Indigenous Studies at the University of Chiapas began to work with women shepherds to select breeding animals based on

the women's own criteria, which included evaluating fleece quality. The selection program showed successful outcome through significant increases in the quality and quantity of wool (FAO, 2007). The women showed high acceptance of the "improved Chiapas sheep," to a great extent because of their involvement throughout all project phases as well as the animals' quick adaptation to local conditions. The project showed that women will be reluctant to adopt an improved breed if it means they must allocate an unreasonable amount of time and labor because the costs to them will far outweigh any benefits that might be gained. Similarly, they may value certain breeds far differently than men based on their priorities and interests. Women benefit most when they have decision-making authority over the animals they manage, even if they do not hold the legal ownership (Miller 2001).

3. Gender, indigenous knowledge systems and livestock genetic resource conservation

Biodiversity, the variation of life forms within a given ecosystem, has been acknowledged for its importance for food security in African communities (FAO, 2004). Gender roles in Africa put women in direct contact with natural resources such as forests, water, land and wildlife, in an attempt to supply basic needs for their households. Therefore, the utilization and conservation of natural resources cannot be effective without the involvement of women. The exclusion – or lack of participation – of women in decision making over conservation and natural resource management can have implications for livestock conservation outcomes because of their different roles and relationships with natural resources and their different indigenous knowledge of biodiversity. Rural women, in their role of farmers are key to maintaining and conservation of local smallholder livestock biodiversity. In their effort to improve and adapt livestock species, manage and exchange livestock in communities (FAO, 2004), women have the greatest impact on biodiversity. Men and women have equally relied on their livestock to provide basic food and other services, however the impacts of climate change has been devastating on smallholder livestock biodiversity in most communities. Changing climate conditions have threatened many native livestock species which have been predominantly utilized by women. As livestock genetic resources become scarce due to climate change effect, women may spend more time on employing less sustainable options, which may erode the existing livestock species biodiversity. For the communities which rely on these resources for survival, it presents a spectrum of challenges that most communities are simply not prepared to face and making them more vulnerable to food insecurity. The vulnerability of communities to climate change can be ameliorated if women who hold the most reliable indigenous knowledge about smallholder livestock biodiversity conservation and utilization are involved. If women's indigenous knowledge can be put into good use through livestock biodiversity utilization and conservation, most communities are less likely to become vulnerable in the context of climate change. It is acknowledged that scientific information on record keeping in pastoral communities is patchy and therefore pastoral communities have continued to rely on their systems of indigenous knowledge to manage their livestock. Information available to date reveal that pastoral indigenous knowledge has complex features reflecting the interrelationships between societal (cultural) knowledge and preference for certain characteristics as well as behavioral patterns which are not necessarily related to performance (Mgongo et al., 2014).

Use of gender analysis and participatory research and communication for development methods to work with rural communities to understand and value their own knowledge systems and build their capacity to respond to and benefit from change (FAO, 1998) may be employed in successful smallholder genetic livestock improvement and conservation programs. The use of indigenous knowledge has been seen by many as an alternative way of promoting development in poor rural communities in many parts of the world (Briggs, 2005). Policy makers are increasingly acknowledging the value of indigenous knowledge in livestock conservation among rural men and women. Such knowledge often includes various aspects of livestock production, such as animal management, hygiene, feeding, watering and use of animal products. Knowledge held by indigenous men and women can differ according to their customary livestock responsibilities. In most cases, where livestock improvement and conservation programs are being carried out, the lack of gender consideration constrains the development of holistic approaches to achieve desirable livestock improvement and conservation goals. This is despite the fact that women have a comprehensive understanding of natural water sources, on which their animals depend, and of seasonal variations in water quantity and quality. They may also have ways of recycling water where it is scarce for livestock production. Women's indigenous knowledge systems in terms of livestock production can be useful for development programs on the basis for upgrading knowledge and practices in the existing situation. This knowledge can act as a key factor in determining the appropriateness of new technologies for livestock

development and the likelihood of their acceptance, since the latter may depend on how they relate to or compete with traditional expertise in livestock conservation.

4. Implications

Mainstreaming gender in livestock genetic improvement and conservation programs can benefit both beneficiaries and project implementers and other stakeholders. It is quite clear that women's participation and contribution to livestock production and improvement is critical. However, they are often neglected in education and training of livestock production issues. This has serious negative implications for overall livestock improvement and conservation programs targeting smallholder farmers. The lack of visibility of women's contribution and participation in livestock improvement and conservation programs has emanated from social, economic and cultural impediments which need to be addressed. If such issues are addressed, will provide a platform for development of gender sensitive livestock policies which gives adequate attention to women farmer's needs in terms of livestock production and conservation education and training. Gender analysis could be handy in monitoring changes in livestock-related genetic improvement strategies and overall well-being more effectively. A gendered approach to livestock improvement and conservation programs improve implementation (working with the most appropriate beneficiaries), and lead to a more effective monitoring and evaluation process (for example, defining gender-sensitive indicators to assess who is benefiting or not benefiting, how, and why). Understanding women's and men's livelihood related roles and responsibilities can lead to more effective design and implementation of livestock genetic improvement and conservation programs. An approach that considers the gender and equity dimensions from within the household as well as across the spectrum of relevant smallholder livestock improvement perspective works best. Any livestock genetic improvement program which ignore gender livestock issues in project design will translate into subsequent suboptimal outcome. There should be conviction in livestock improvement programs implementers of the need to tap into the vast indigenous knowledge systems stock in livestock production if appropriate planning and livestock management strategies are to be developed in a sustainable way

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