



Policy support for sustainable crop intensification in Eastern Africa



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ABSTRACT

Sustainable Crop Intensification (SCI) has been recognized as a means to increase crop productivity and improve rural livelihoods by governments and development partners in Sub Saharan Africa. Designing and implementing policies that address the bottlenecks to SCI interventions is pertinent to address low crop productivity. However, little attention is geared towards analyzing the existing policies and examining their provision in addressing the key challenges to SCI. Based on analysis of policy documents and perception of key policy actors in Ethiopia, Kenya, and Uganda, this paper looks at the level of policy support for SCI in Eastern Africa. Results indicate that lack of incentives to invest in SCI, and poor capacity of agricultural extension system in technology development and dissemination constrain implementation of policies supporting SCI. Mistrust among policy actors over 'hidden' interest of international donors in Genetically Modified Organisms (GMOs) and failure to have open discussion to clarify the involvement of multinational companies in regional trade hamper the implementation of policies supporting SCI. Policies lack emphasis on protecting farmers' rights over land tenure and local varieties, posing a challenge to policy harmonization and regional trade. Therefore, developing incentive mechanisms for SCI, and strengthening the capacity of agricultural extension system to meet the requirements of SCI are required. Encouraging public dialogue over the national and regional interests over involvement of multinational companies in regional trade and on GMOs could enhance the acceptability of the policies supporting SCI by many of the agricultural actors. Strengthening farmer groups at different levels could also play important role in protecting farmers' rights in regional trade.

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1. Introduction

Low crop productivity pertaining to dependence on rain fed farming, decline of soil fertility, and tenure insecurity constrains food security and improvement of rural livelihoods in Eastern Africa (Chikowo et al., 2015). The low crop productivity in turn makes feeding the growing population a challenging task (Josephson et al., 2014). Green revolution has been instrumental in addressing the problem of low crop productivity in Asia through increased use in fertilizer, mechanization, and expansion of irrigation practices (Kassie et al., 2015). However, the efforts to promote green revolution in Sub Saharan Africa (SSA) fall short due to lack of tenure security to increase investment in farm plots, and the low level of irrigation development to increase crop productivity (Otsuka and Larson, 2013; Jayne et al., 2014).

Past decades also witness that policy measures in SSA including

market liberalization have deprived smallholders from incentives to invest in interventions which increase crop productivity. The measures also limited governments' support in building market institutions and physical infrastructure which enhance crop productivity in a sustainable manner (Reardon et al., 1999). Such experiences indicate the need for Sustainable Crop Intensification (SCI), a strategy focusing on increasing crop productivity while reducing degradation of natural resources (Vanlauwe et al., 2014; Chartres and Noble, 2015). SCI is a strategy for increasing the use and/or efficiencies of agricultural inputs such as labor, fertilizer, pest control, and (improved) seeds to achieve higher agricultural yields per unit area whilst simultaneously reducing the negative impact on the environment (Pretty, 1997; Godfray and Garnett, 2014; Godfray, 2015). Loos et al. (2014) points out that the design of SCI interventions need to follow holistic approaches and consider access to food, among others, for achieving positive outcomes on food security and livelihoods. Accordingly, this paper considers the following SCI interventions that aim to improve agricultural productivity in SSA: 1) Increasing the use of good

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agronomic practices, good seed varieties, and fertilizers; and 2) Increasing development and dissemination of technologies, and improved agricultural extension and advisory services (Chikowo et al., 2015; Kassie et al., 2015).

In line with above, there is a renewed interest in creating a supportive policy and legal framework for SCI in SSA. But, the fact that development partners are at the center of promotion of SCI has created suspicion among other stakeholders that SCI could not be different from past ‘imported’ policies with limited outcomes such as policies supporting conservation agriculture and organic farming (Morris, 2011; Mockshell and Birner, 2015). Such a dilemma could hamper the effectiveness of interventions towards SCI by reducing ‘ownership’ by local communities and consequently limiting the resources that non-state actors invest in SCI interventions. For example, the efforts towards harmonization of seed policies in Southern Africa have faced resistance from a number of Civil Society Organizations (CSOs) that perceive the efforts as an imposition by ‘outsiders’ (Swanepoel, 2014).

Several studies are conducted on the determinants of crop intensification, policy and market reforms, and the relevance of SCI for food security in Eastern Africa (E.g., Reardon et al., 1997, 1999; Kijima et al., 2011; Pickett, 2013; Kassie et al., 2015). However, evidence is lacking on the level of policy support for SCI. Such evidence is, however, important to improve implementation of policies for SCI in Eastern Africa. Therefore, the present paper attempts to fill the gap by answering the questions: 1) What are the most critical challenges for achieving SCI according to key policy actors in Ethiopia, Kenya, and Uganda?, and 2) How do existing and proposed policies in the three countries support interventions relevant to SCI?

2. Conceptual framework

The theory of agricultural intensification is spearheaded by the seminal work of Ester Boserup (1965) on *“The Conditions of Agricultural Growth: The Economics of Agrarian Change under Population Pressure”*. She argues that farming communities change their mode of farming in response to the increasing population pressure. Boserup’s work contributes to the debate on the drivers of agricultural intensification and has led to a growing interest in understanding the reasons behind agricultural intensification. Yet her work is criticized for: 1) simplifying the dynamics of agricultural systems and considering population pressure as the sole driver of change (Hunt, 2000), and 2) not emphasizing the role of market and governments in the processes of agricultural intensification (Djurfeldt et al., 2005). Among others, Brookfield (2001) and Stone (2001) indicate that agricultural intensification occurs not only in response to population pressure but also due to demographic, socio-economic, and environmental conditions. Börjeson (2007) also argues that agricultural intensification in the Mbulu highlands of Tanzania is not a consequence of land scarcity and population pressure. Thus, the post-Boserup literature reveals a consensus on the plurality of factors, beyond population pressure, lead to agricultural intensification.

In SSA, market liberalization and structural adjustment programs dominated the development agenda in the 1980s and 1990s, mainly with the initiative of the World Bank and the International Monetary Fund (IMF). Agricultural development has got little attention in terms of creating an enabling environment, and also in increasing the level of investment, contributing to under-performance of the sector. However, the last decades witness a revival of interest in agriculture among governments and development partners as a development agenda that can be explained by the commitments to increase investment in agriculture. For instance, African governments have signed the Maputo declaration

to commit at least 10% of the public finance to support interventions that increase agricultural productivity, and targeting a growth rate of 6% per annum for the agricultural sector (AU, 2003). The commitments are crucial to strengthen the implementation of SCI interventions in the region considering lack of financial resources has limited the effectiveness of past interventions. Governments also commit to create an enabling environment for SCI by reducing bottlenecks in policy and legal frameworks.

Different explanations exist on why the Asian model of crop intensification failed to work in the SSA. For example, Toenniessen et al. (2008) point out that the low and erratic rainfall, large diversity of agro ecological zones, little irrigated land, and lack of mechanization to save farm labor constrain the efforts made towards SCI in SSA. Nin-Pratt and McBride (2014) confirm that lack of affordable labor-saving technologies, and low rates of technology adoption limit the efforts to promote SCI in Ghana. In the case of Asia, intensification of rice becomes possible under conditions of strong ‘political will’ and the presence of supportive policies in place (Flora, 2010; Otsuka and Larson, 2013).

The failure of past efforts towards SCI in SSA is also associated with the lack of policy support for SCI. Among others, Van Donge et al. (2012) indicate that the policy support revolves around liberalizing the economy and improving rural livelihoods. The authors claim that the mere focus of policy makers on the absence of resources instead of utilizing the available resources to improve crop productivity has led to failures of past interventions towards SCI. Other studies also confirm the lack of supportive policies for SCI in SSA (Crawford et al., 2003; Pretty et al., 2011). For example, Bezemer and Headey (2008) assert that policy makers in SSA are often biased towards issues in urban areas, and invest little time in developing context-specific strategies towards SCI. Also, Otsuka and Larson (2013) emphasize that the SCI interventions in SSA are constrained due to the politics-driven nature of the interventions. Such claims raise questions on which elements of policies actually support SCI, and the roles of different actors in shaping the policies supporting SCI.

In this paper, we use the Policy Arrangements Approach (PAA) to analyze the policy support for SCI in Eastern Africa as suggested by Arts et al. (2006) (Fig. 1). Policy arrangements refer to an arena in which resources, actors, discourses, and institutions (rules of the game) interact to shape the policies (Leroy and Arts, 2006). Discourses refer to sets of ideas, narratives, perceptions and beliefs which influence policy processes (Burnham et al., 2008). The approach has become useful in understanding the influence of the actors, discourses, institutions, and resources on the policy processes. Among others, Ayana et al. (2013) adopts the approach to analyze the historical development of forestry policies in Ethiopia. As well, Lamers et al. (2014) examines the governance of partnerships in conservation tourism in Kenya using the approach. We employ the PAA approach to compare the policy constraints to achieve SCI based on the perceptions of key policy actors with what is provided in the policies relevant for SCI in Ethiopia, Kenya, and Uganda.

3. Data collection and analyses

This paper is based on data collected during June to October 2015 using computerized searches of policy documents from the official websites of government ministries of Ethiopia, Kenya, and Uganda. Policy documents relevant for SCI were searched, organized, and analyzed following the guidelines suggested by Hart (1999, 2001). Some of the key words we used during the search include seed policy, fertilizer policy, extension policy, and seed laws. We selected policies that have direct influence on the interventions towards SCI such as policies that influence farmers’

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