Towards farm resilience: farmer entrepreneurship and value chain collaboration

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Introduction: Agriculture under the changing climate

Agriculture is the main economic activity of most sub-Saharan African (SSA) countries, employing about 60% of the workforce and contributing about 30% of gross domestic product. Agriculture in SSA is highly exposed to volatile climatic and market conditions, particularly given the overreliance on rain-fed agriculture and the limited ability of households to adapt. As such, ensuring food security under a changing climate is one of the major challenges of our era.

Climate change adaptation is a priority in achieving Africa’s development goals and is becoming an important topic of attention in many food security programmes. One approach of these programmes is to invest in resilience strategies through which households increase their food security. The concept of resilience has gained prominence in research and policy in efforts to strengthen farm and farmer adaptation to climate and market challenges. While the concept continues to gain attention, the drivers of farm resilience have barely been investigated, and thus the question of how resilience can be stimulated in a smallholder farming set-up remains unanswered. Without a clear understanding of the drivers that may strengthen or undermine farm resilience, developing effective policy programs remains a challenge.

We define farm resilience as the ability of a farm to withstand disturbance and to reorganize while retaining essential functions, structure and identity (Walker and Salt, 2012). This issue brief identifies the drivers that strengthen or undermine farm resilience, so as to guide further development of food security programmes.

Based on literature, we identify three drivers of farm resilience. The first is the behavioural attributes of farmers, which reflect their perceptions of the relative benefits, cost and risks associated with farm decisions. We identify farmer entrepreneurship and specifically farmer entrepreneurial orientation (EO) Vlasov et al. (2018) as a key factor that supports farm resilience.

The second driver is the collaboration that farmers have with other farmers (collective action). The third driver is the business relations that farmers maintain with other actors in the value chain, such as the buyers of farm produce. In the next sections, we elaborate on these three drivers. In the conclusion, we explore potential investment strategies that can be included in food security programmes.

Key messages

- Climate change adaptation should be an inherent aspect of all food security programmes.
- Resilience is a social process that can be fostered and developed over time.
- Farmer entrepreneurship, farmer organizations and the nature of farmer–buyer relationships are potential pathways to strengthen farm resilience.

Farmers’ organisation potato store
2. The role of farmer entrepreneurship

Farmers are social actors who use their cognitive traits to make investment and management decisions in order to achieve desired goals. Given the ever-changing farming environment, farmers’ ability to adapt depends on their ability to innovate, act proactively and take calculated risks. Collectively, these three characteristics are referred to as farmer entrepreneurial orientation (Shadbolt and Olubode-Awosola, 2016). We consider three dimensions of entrepreneurial orientation, innovativeness, proactiveness and risk-taking (Lumpkin and Dess, 1996). Innovativeness is the ability to shift from established practices and technologies towards supporting new ideas and practices through learning and experimentation. Proactiveness is the ability to anticipate and act on future needs, such as introducing product varieties before other actors do, thereby benefiting from a first-mover advantage. Proactive farmers capitalize on emerging opportunities. The third characteristic, risk-taking behaviour, describes the willingness to invest resources in risky activities and processes, such as introducing new crop varieties that are drought-tolerant or investing in irrigation equipment. Farmer EO may explain why farmers facing climate change adopt climate-smart agriculture practices.

Farmer EO, being a cognitive trait, enables farmers to make use of existing resources in response to changes taking place in and around the farm. Figure 1 shows that farmer EO influences farm resilience.

3. The role of farmer organizations

A farmer organization (FO) refers to a voluntary collective action organization formed and controlled by farmers to achieve common interests (Bernier and Meinzen-Dick, 2014). An FO can take different forms, including farmer cooperatives, farmer self-help groups and farmer hubs. FOs create the space within which outcomes of individual and collective action emerge, and they are the platforms through which external actors such as development organizations can influence farmers’ adaptation strategies. Specifically, FOs allow farmer members to share risks, diversify income sources, access new markets and learn new skills and technologies. These all contribute to farm resilience.

Figure 1: Drivers of farm resilience

A typical example through which the services provided by an FO may influence farm resilience is through providing training and advisory services that give farmers learning opportunities (Jacobi et al., 2013). FOs provide extension services to their members and a conducive environment for experimentation, which enables farmers to adapt to the continuously changing environment. In addition, FOs facilitate exchange programmes for learning between experienced and less-experienced farmers. For instance, in potato farming, the outcome of training and advisory services provided by FOs can result in changes in cultivation techniques, such as crop rotation, and new potato varieties. As such, FOs impart knowledge to help farmers convert existing resources into successful adaptation strategies.

3. The role of the farmer-buyer relationship

In environments characterized by the risks and uncertainties facing agriculture in developing countries, farmers and their trading partners establish relational mechanisms to manage the turbulent environment they operate in (Zhang and Hu, 2011). The relationships that farmers develop with the buyers of the farm’s produce have the potential to strengthen farm resilience. For potato farmers for instance, the relationships with their buyers enable them to better adjust their production decisions to meet demand in the markets and exchange information. It also allows them to access credit and innovations such as certified potato seeds in varieties that meet specific market requirements and are tolerant to drought, pests and diseases. It enables farmers to respond to climatic changes, reduce transaction costs,
share risks and increase opportunities to access remunerative markets (Fafchamps and Minten, 1999).

Strong farmer–buyer relationships influence farm resilience (see Figure 1). For instance, if the relationship between the farmer and the buyer is one based on trust and commitment, then the buyer will be willing to support the farmer to adapt to the changes facing the farm, thus contributing to farm resilience.

1. Influence farmer entrepreneurship – enabling farmers to be innovative, trigger their risk-taking behaviour and enable them to act proactively, thus building farm resilience.
2. Support FOs endogenously, through their members, or exogenously, through outside parties such as government agencies or NGOs. These support mechanisms facilitate the FOs to deliver the key services necessary to build farm resilience.
3. Enhance fair and reliable farmer–buyer relationships. This will enable investment by both the farmers and buyers in their business. For farmers, this translates into investment in adaptation strategies that make farms resilient.

Supporting farm resilience is clearly a long-term social process rather than a technical challenge. It is thus important for development practitioners to identify what drives such social processes; to influence these processes through deliberate and targeted policy interventions; and to target their interventions towards supporting farmer entrepreneurship, farmer organizations and farmer–buyer relations.

5. Conclusion

Climate change continues to hamper agricultural production, which is expected to significantly affect smallholder farmers in developing countries. Food security programmes should therefore focus on strategies that strengthen farm resilience. We have identified three pathways through which farm resilience can be strengthened. These are through investing in farmer entrepreneurship, establishing and supporting farmer organizations and enhancing strong farmer–buyer relationships. From our literature synthesis, we conclude that policy and managerial efforts need to be directed to the approaches that:
References
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3R Kenya Project
The 3R Kenya (Resilient, Robust, Reliable — From Aid to Trade) project is a learning initiative supported under the Agriculture and Food and Nutrition Security (FNS) program of the Embassy of the Kingdom of the Netherlands. 3R Kenya seeks to generate evidence and lessons from FNS and other related programmes that support competitive, market-led models in spurring agricultural development. It focuses on the aquaculture, dairy and horticulture sectors. 3R Kenya is executed at a time when Dutch government’s bilateral relations in Kenya are transitioning from a focus on Aid to Trade to enhance the development of agri-food sectors. Through evidence generation and stakeholder dialogue, 3R seeks to contribute to an understanding of effective conditions for sustainable inclusive trade for transforming resilient, robust and reliable agri-food sectors.

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