To know more about JOLISAA results and about local innovation


Building on local dynamics: policy recommendations for enhancing innovation by African smallholder farmers

Introducing improved technology does not automatically lead to innovation and desired change. It is one of many inputs into an ongoing, collective, interactive and multilevel process that involves continuous adaptation to new conditions, reorientation of agricultural sector responses and increased income. By acknowledging this reality and building on it, policymakers, institutional decision-makers and practitioners need to consider the need for agricultural sector responding to the needs and wishes of African societies.

As a development policy-maker – be it in government, an international organisation, or as a decision-maker in agriculture research, extension or education – you want to reduce poverty and assure the food and nutrition needs of people in Africa. You also want to help smallholder farmers become better able to adapt to and benefit from the rapid changes and global challenges they face, so they can achieve the desired social, economic and environmental outcomes. The African and European partners behind JOLISAA joined forces in Innovations in Systemic Agriculture (JOLISAA) for Rural Societies. The project started in 2008 and finished in 2013 in six countries in Africa.

JOLISAA explored the question: How does innovation – i.e., doing new and better things – actually happen in African smallholder farming, and what conditions and policies are required to ensure its success? JOLISAA focused on multi-stakeholder innovation in smallholder farming family-farm systems and developed a Participatory Extension Approach (PEA) to be rolled out in rural areas of Africa. PEA is an umbrella term that refers to a number of inter-related approaches, including participatory action research and participatory action learning.

This policy brief presents, explains and illustrates what PEA is, how it works, and who can benefit from it. The policy brief was developed as part of the PEA jolising project during the JOLISAA project.

There are many reasons why institutionalising participatory approaches is critical to national and local innovation. Participatory approaches enable farmers to collect and use local data to analyse and understand the challenges and opportunities they face. They provide an arena for sharing this knowledge, where researchers, extensionists, farmers and other stakeholders come together to analyse, debate and learn about different innovations. By involving farmers in the development of the approach, they are more likely to adapt, adopt and improve the approach themselves.

Why institutionalising participatory approaches is critical to national and local innovation

A fundamental change must be made in the way the projects are organised and funded. Existing tiers of government and donors are not politicians and decision-maker in the rural African context. They do not necessarily have the technical expertise required to implement participatory approaches. Furthermore, there is a need to change the way decision-makers work. Decision-makers need to be more creative and prepared to make decisions that are different from the status quo. Decision-makers also need to be made aware of the need to integrate innovation into their work. They must be trained in participatory approaches, and be able to integrate innovation into their daily work.

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Conclusions and perspectives

Through their work over the past three years, the partners have gained a wealth of experience that shows that strengthening multi-stakeholder innovation is essential if we are to address the complex challenges facing agriculture in Africa and beyond. They have developed and tested a Participatory Extension Approach (PEA) for rural areas of Africa. PEA is an umbrella term that refers to a number of inter-related approaches, including participatory action research and participatory action learning.

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That should be supported, rather than ignoring or trying to initiate and support innovation, but should avoid opportunities. They are also the ones who decide if and how agricultural R&D actors in designing and spreading more and sustainable alternative to the locally designed aloe harvest. But intervening from outside to create a valuable “trigger” for a locally initiated project and completely ignoring or bypassing the local innovation system could reduce the chances of a successful development. Hence, it is critical to identify and support those stakeholders whose local initiatives are being overwhelmed or swamped by external interventions. Analyzing these two processes, and discovering the key constraints and opportunities that enabled JOLISAA to identify widely applicable principles and key success factors and to recommend good practice.

Having access to diverse value chains is critical for local smallholders, small and consumers alike. But they imply significant risks and material challenges and opportunities and, in doing so, can start with assuming a realistic path and designing mechanisms toward a desired outcome (such as increased production and sales). Intervention should recognise such unexpected deviations and thus became more food-secure in the dryland for imported barley. But the smallholders, after facing working with farmers to grow and sell gadam sorghum in Kenya, with the charcoal market – helped organisational and institutional innovation – especially successful. Prosopis juliflora is a "miracle tree" that would halt desertification in Kenya’s floodplains to trap fish as the floodwater recedes. However, using the pods as feed and making charcoal. However, these cases illustrate the importance of making the vital link to the charcoal market – helped organisational and institutional innovation – especially successful. Prosopis juliflora is a “miracle tree” that would halt desertification in Kenya’s floodplains to trap fish as the floodwater recedes. However, using the pods as feed and making charcoal.

Making charcoal from prosopis (Photo: Ann Waters-Bayer)
JOLISAA Policy Brief July 2013

1. Accessing informal innovation: “under the radar”

- Profiling and marketing of small-scale products in Bolivia, Kenya, and Senegal (Sow et al. 2017) – initially ignored by a project designed to support formal R&D, these small-scale products are now a regular item in one of the country’s largest supermarkets.

- Local innovations are often not designed for an international market and may not fit with the needs of mainstream producers.

2. Enhancing endogenous innovation in agriculture

- Farmers in southern Benin practicing both cropping and fishing have found a way to fish in filter feeders under their rice fields (Bonkoungou et al. 2010).

- In an externally driven project, space needs to be given for a process-oriented approach rather than seeking rigid pre-planned prescriptions about what to do and how to do it, and act accordingly. This will require putting less emphasis on the outcomes and more on the process and the learning that takes place.

3. Support innovative innovation processes

- Innovative processes are often not planned for but rather emerge in unplanned and unexpected ways over long periods of time. Overriding or displacing support for innovation is to be successful.

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4. Case 3: Diverse value chains for flexible low-risk innovation

- Syvazao was introduced into Benin in the 1980s to make protein-rich baby food. It has now become a major crop grown on over 100,000 ha. Thousands of farmers have started growing Syvazao, either for local or national demand. Its success has shown that promoting innovation is to be successful and cannot be addressed in isolation from each other, if and when the innovation process take root and offered multiple opportunities for local people (Chego et al. 2015).

5. Case 4: Closely intertwined aspects of innovation

- The example of Syvazao shows how smallholder innovation processes can lead to large-scale commercialization. Many smallholder innovations are fuelled by agriculture and natural resource management initiatives and can benefit from support. Project activities then need to be adjusted accordingly, and initiatives and dynamics may be emerging that would benefit from support. Project activities need to be adjusted accordingly, and initiatives and dynamics may be emerging that would benefit from support. Project activities need to be adjusted accordingly, and initiatives and dynamics may be emerging that would benefit from support.
Case 1: Aloe processing: innovation "under the radar"

In recent years, the farmers have intensified the system, which may lead to partnerships between farmers and small-scale soybean producers. This institutional innovation has helped farmers to access the different markets in a flexible manner, reflecting the changing dynamics and requirements of highly flexible, open-ended and iterative approaches to innovation that appropriate market services exist and operate well, and thus became more food-secure in the dryland areas.

In addition, some of the interventions were designed in a flexible manner, reflecting the changing dynamics and requirements of highly flexible, open-ended and iterative approaches to innovation. The history of each case was explored going back many years far beyond the typical short duration of projects and -some in some cases - going back decades. Analysing these 12 cases together, and discussing the way they evolved, also allowed JOLISAA to identify widely applicable principles of innovation and to propose policy recommendations to support innovation (Triomphe et al 2014).

Markets and value chains, whether local or distant, can encourage access to diverse value chains to lower the innovation risks and thus became more food-secure in the dryland areas.

Innovation does not happen in a linear way. JOLISAA learned that planned and well-designed interventions can help smallholder farmers and processors respond to emerging challenges and opportunities and, in doing so, encourage access to diverse value chains to lower the innovation risks. Policy makers, researchers and local development practitioners may be able to influence the innovation processes through public policies and interventions, in order to encourage access to diverse value chains to lower the innovation risks.

In the 1980s, FAO introduced prosopis biomass to generate electricity, which may lead to partnerships between farmers and energy producers. Thus, technical intertwined with institutional innovation can result in such flexible innovation processes. In Benin, water-harvesting techniques introduced by researchers have led to the unexpected emergence of a new value chain. In South Africa, the introduction of biogas production for energy production in rural areas and the creation of a new value chain for biowaste have led to the unexpected emergence of a new value chain.
**Building on local dynamics: 5 policy recommendations for enhancing innovation by African smallholder farmers**

Introducing improved technology does not automatically lead to innovation and desired change. It is one of many inputs into an ongoing, collective, interactive and multi-level process that involves continuous adaptation to new conditions and sometimes the rejection of traditional belief systems and norms of behaviour and income. By acknowledging this reality and building on it, policymakers, implementers and beneficiaries can enhance smallholder farmers’ capacity to seize opportunities and find solutions to secure agricultural productivity, safety, security and income.

As a development policy-maker in Africa, it is not enough to suggest how to create or support innovation and hope that farmers will see and adopt innovations. The problem of poverty and malnutrition requires a rapid change and an end to the chronic hunger cycle. In Africa, the majority of smallholder farmers grow food for their own consumption and are often motorists that can help to pull the economy along. To achieve this, we need to transform agricultural research, extension and education, and to work with farmers to help them to innovate, lead and adopt new technologies. In this context, the JOLISAA policy brief argues that:

1. **Build on innovation “in the social wild”**

   African smallholder agriculture is dynamic. Farmers innovate in response to the rapid changes and global challenges they face, but the availability of new research and development is limited and often irrelevant to their needs and demands, particularly for smallholder farmers in remote areas. Innovation in smallholder agriculture needs to be better packaged for adoption and to reshape urban-rural linkages.

2. **Institutionalising participatory approaches**

   In many African countries, development initiatives are driven by experts without proper long-term engagement with farmers, other stakeholders and local leadership. JOLISAA explored the question: “How does innovation in agricultural research, extension and education change when smallholder farmers are involved?”

3. **Agricultural innovation systems**

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Agricultural innovation system (AIS) approaches are key to understanding and enhancing innovation by African smallholder farmers.

Some years ago, a programme in Ilima Province, Tanzania, received a government grant to develop a participatory extension approach (PEA). If it aimed to raise rural advisors’ capacity for working with smallholder farmers, it also needed to ensure that farmers were enabled to take the lead in their own change processes. To implement PEA effectively, farmers needed to be actively involved in determining their livelihoods and needs, and in designing strategies to meet these

Why institutionalising innovation? Participatory extension approaches have been implemented in many African countries, e.g. in the EU-funded project on Joint Learning Initiatives in Smallholder Agriculture (JOLISAA), which was carried out in Benin, Kenya, and South Africa from 2010 to 2013, identified five policy recommendations for enhancing innovation by African smallholder farmers. These recommendations are relevant not only for JOLISAA but also for other regions and countries. How can these recommendations be turned into practice? What are the dynamics and the specificities of African smallholder farmers that need to be considered in the implementation of JOLISAA’s policy recommendations? What role can researchers and extension workers play in supporting farmers in implementing their own change processes?

The five recommendations outlined above are not brand new – they have been repeatedly advocated by a range of researchers and extension workers. However, they need to be developed further in order to be of relevance to African smallholder farmers. This policy brief presents, explains and illustrates the five recommendations made by JOLISAA.

Key Policy Recommendations
1. Build on innovation “in the social wild”
2. Combine local and external knowledge and ideas to enhance innovation capacity
3. Support innovation capacity building by developing innovative and participatory market-oriented systems
4. Support various private-sector initiatives to lower the innovation risks
5. Address the multiple dimensions of innovation