

ANNUAL REPORT 2018

Compiled by Vincent Mariadho, Prolinnova–Kenya National Coordinator



Jack Onege, an innovator from Kisumu, taking the Chief Guest (Hon. Gilchrist Okuom, Kisumu County's Executive Committee Member for Agriculture, Food, Livestock and Fisheries) through his hanging garden innovation during the International Farmer Innovation Day on 29 November at Obambo Chief's Camp, Kisumu West Sub-County.

Photo courtesy: Vincent Mariadho

Nairobi, March 2019

1. Introduction

Prolinnova–Kenya (PK) is a multi-stakeholder platform (MSP) initiated in 2007 to promote farmer-led innovation processes while recognising the dynamics of indigenous knowledge so as to achieve food security, sustained livelihoods and safeguard the environment. PK is composed of various stakeholders in non-governmental, governmental and research organisations and is managed by a National Steering Committee (NSC) that has the overall mandate of coordinating its activities in the country. Currently, the NSC is composed of World Neighbors (host organisation), Kenya Agriculture and Livestock Research Organization (KALRO), Inades–Formation, ETC Consulting, Community Rehabilitation Environmental Programme (CREP), Rural Development Initiative (RUDI) and State Department of Agriculture.

The Country Platform (CP) currently is implementing a three-year project – Promoting Local Innovation for Food and Nutrition Security (Proli-FaNS) – that is in its final year.

2. Achievements, challenges and perspectives

Key activities implemented

During this reporting year, the key activities implemented were joint experimentation, identification of local innovations, coordinating and facilitating the African CPs’ annual meeting, gender mainstreaming in farmer-led research workshop and commemorating the International Farmer Innovation Day as described below:

2.1 Joint experimentation

Joint experimentation is a farmer-led process that brings together local innovators, extension officers from NGOs and government, research scientists, other stakeholders in agricultural research and development (ARD) with an aim to better understand, validate and/or improve promising identified local innovations. The process helps in building the capacity of farmers and their communities to innovate, adopt and adapt for a food- and nutrition-secure society.

During the reporting year, 11 local innovations (7 in Kisumu and 4 in Makueni) underwent the joint experimentation process. The innovations were: Hanging garden (Kisumu), Plastic chicken brooder (Kisumu), Two-in-one energy-saving stove (Kisumu), Modified cassava pits (Kisumu), Improved fish smoker (Kisumu), Sack garden irrigation kit (Kisumu), Local poultry medicine *Ajujo manyasi* (Kisumu), Organic tobacco pesticide (Makueni), Organic fruit fly trap (Makueni), Local chicken incubator (Makueni) and Poultry disease control using *Aloe vera* and croton seeds (Makueni).

2.2 Identification of new local innovations

In collaboration with the Local Steering Committees (LSCs) and partner organisations such as the Rural Development Initiative (RUDI) in Kisumu and Inades–Formation in Makueni, PK identified five new local innovations. In total, 40 local innovations have been identified since 2016. The new local innovations are:

1. Egg viability detector (Breakthrough *Ohobore*), in Kisumu. The innovation is by Vincent Oloo. He places eggs in water and observe their settling posture and behaviour to determine highly viable eggs for hatching.
2. Controlling striga weed using dried leafy onions, in Kisumu. The innovation is by Jack Onege. He plants maize seeds together with handful dried onion leaves in the same hill (planting hole). The onion suppresses the growth or sprouting of striga weed.

3. Hot water in a jerrican to provide heat in a brooder, in Makueni. The innovation is by Joel Tete. The innovator pours boiled water in a 20-litre jerrican. The jerrican is wrapped with a piece of cloth and placed at the centre of the brooder to supply warmth to the chicks.
4. Making chapatti from indigenous crops (pumpkins, sweet potatoes, green grams and dolichos) and wheat flour, in Makueni. The innovation is by David Mutua. The innovator makes dough using flour from indigenous crops such as pumpkins, sweet potatoes, green grams and Dolichos, each mixed separately with wheat flour. The dough is then used for making chapatti. This makes the chapatti nutritionally diversified compared to conventional chapattis.
5. Fireless cooker and improved traditional hot pot, in Makueni. The innovation is by Ms Damaris Munyao. The fireless cooker is made of a woven basket with its interior completely covered using aluminum foil (which can be replaced by any shiny material). The cooker and its contents (food to be cooked) are placed in the sun for heat. Food that is not served immediately is kept and fully enclosed in a woven basket to keep them warm. The basket has its interior made of black linen materials with sawdust between the linen and the basket. This warmer is christened “improved traditional hot pot” and is locally referred to as *kiinga*. The hot pot can keep foods warm for up to 8 hours.

2.3 Farmer Innovation Fairs/Day

The International Farmer Innovation Day (IFID) is an international event enshrined in the Prolinnova network calendar. This annual event was initiated by Prolinnova to create awareness, celebrate and stimulate the creativity of innovative farmers (including pastoralists, fishermen and other local natural resource users) and to provide sources of inspiration to farmers and other stakeholders in ARD. It also provides a stage to demonstrate how research and extension agents (private and governmental) can interact and support this process through participatory innovation development (PID). Since 2012, a number of similar activities have been organised and celebrated by different CPs.

In the reporting period, PK and its partners organised and conducted both a farmer innovation fair on 28 February and the International Farmer Innovation Day on 29 November in Makueni and Kisumu, respectively.

a) Farmer Innovation Fair in Makueni

The theme for this fair was “**Creating opportunities through farmer-led innovations**”. The fair attracted over 192 participants and 7 organisations, both governmental and non-governmental, drawn from Makueni and Kisumu Counties.

A total of 13 local innovations were showcased and were categorised in the following six themes:

1. Recycling locally used materials
2. Energy conservation
3. Pest and disease control
4. Livestock farming
5. Feed formulation
6. Human and animal health.



a) *The innovator, Mr Joseph Kavoi, explains how to make fertilizer from rabbit's urine.*



b) *The innovator, Mr John Musumbi, explains how to make a pesticide from a concoction of tobacco, cactus and liquid detergent.*

b) International Farmers Innovation Day in Kisumu

The theme for the IFID was “**Promoting Indigenous Technical Knowledge in Farmer-Led Research for Enhanced Livelihoods.**” The event attracted 303 participants mainly drawn from Kisumu and Makeni Counties. The event was graced by Hon. Gilchrist Fulbert O Okuom, the Kisumu County’s Executive Committee Member (County Minister) for Agriculture Food, Livestock and Fisheries. The County Ministry through the County Minister awarded 24 (13 men and 11 women) innovators participating in the Proli-FaNS project with certificates of recognition. A total of 20 local innovations showcased were categorised in five themes:

1. Crop and livestock production
2. Energy use and conservation
3. Pest and disease control
4. Feed formulation
5. Food processing and value addition.

The farmers’ fair during this event – apart from creating awareness and appreciating the farmer innovators – was also used to urge community members to share their innovations and adopt and adapt local innovations to improve food and nutrition security.



Joe Ouko, an innovator from Kisumu, taking the Chief Guest through his LOFODA-G-Meal when he visited the farmer's stand.



John Musumbi, an innovator from Makeni, takes the visitors through his innovation.



Eunice Ayieko, a female innovator from Kisumu, being recognised by the Department of Agriculture, Food, Livestock and Fisheries, Kisumu County Government, during the event.



Damaris Munyao, a female innovator from Makeni, being recognised by the Department of Agriculture, Food, Livestock and Fisheries, Kisumu County Government, during the event.

2.4 Proli-FaNS partners workshop and African CPs regional meeting

This event was held on 22–23 May at the Methodist Resort and Conference Centre in Nairobi and hosted by World Neighbors (WN). The meeting was attended by representatives from the five CPs participating in the Proli-FaNS project and other Prolinnova CPs as well as members of the Prolinnova Oversight Group (POG) and the International Support Team (IST). The meeting discussed the status and progress of the Proli-FaNS project as well as reviewed and discussed the Prolinnova network regionalisation process in Africa.



The Proli-FaNS partners' workshop and African CPs regionalisation meeting at Methodist Resort and Conference Centre, Nairobi, Kenya

2.5 Workshop on gender mainstreaming in farmer-led research

A workshop to orient facilitators on gender mainstreaming in farmer-led research was conducted on 29 October to 2 November at the Methodist Resort and Conference Centre, hosted by World Neighbors in collaboration with the Royal Tropical Institute (KIT) with support from the Food and Agriculture Organization (FAO). The workshop participants were drawn from ARD stakeholders with diverse institutional affiliations from the Proli-FaNS action-learning sites (Kisumu and Makueni), and Franklin Avornyo from the Animal Research Institute in Ghana and a member of the Prolinnova–Ghana platform. The workshop was facilitated by Chesha Wettasinha and Mona Dhamankar of KIT.

The objectives of the workshop were:

- To orient the participants on the guidelines for making local innovation and farmer-led joint research more gender responsive;
- To build capacities for identifying, analysing and documenting local innovation and farmer-led research using a gender lens;
- To elicit feedback from participants to revise and improve the guidelines for effective operationalisation.

The workshop programme included presentations, topical group discussions and a field trip to the Makueni action-learning site. The topics described below were covered.

a) Local innovation and farmer-led joint research

Highlighting local innovation and joint experimentation concepts and their importance to food and nutrition security as tabulated below:

<p>What is local innovation?</p> <ul style="list-style-type: none"> - Home-grown adaptation of an indigenous practice - New way to solve a problem - Process of discovering and developing new ways of agricultural production or natural resource management 	<p>How does a local innovation differ from a traditional practice?</p> <ul style="list-style-type: none"> - It includes an element of adaptation. - It is specific and new to the context/ area. - It is new and uses things/resources found in the local area.
<p>Characteristics of farmer-led joint research?</p> <ul style="list-style-type: none"> • The farmer/innovator determines the research question based on his/her interest and need. • Not as rigorous as formal scientific research (e.g. not very complicated in terms of data collection – uses data that a farmer understands, deems useful and is willing to measure) • Methods used are not complex. • External participants (such as extension agents, scientists) play a backstopping role, giving the lead to the farmer innovator. 	<p>Why is local innovation important? Why look for local innovations?</p> <ul style="list-style-type: none"> - It is a process that leads to improved production. - It leads to new products/ ways of doing things that are less costly and have the potential for replication. - It is a process more suitable to deal with effects of climate change due to site specificity. - It recognises the creativity of small-scale farmers who come up with their own solutions to problems they face.

Why is local innovation and farmer-led joint research important for food and nutrition security (FNS)?

- Uses locally available material for achieving food and nutrition security
- Provides context-specific solutions/technologies/products which tend to be more sustainable, also in terms of adaptation to climatic conditions
- Ensures food sovereignty
- Creates conditions for farmers to learn new ideas – which are not costly – from each other
- Provides cost-effective ways of improving food production, as resources are locally sourced and methods are adapted to local conditions
- Enhances a sense of ownership among farmers
- Complements scientific research with farmers' expertise and experience
- Allows to find and harness information generated by and available with farmers
- Promotes options that are sustainable, context specific and build capacity
- Has the potential to combine the expertise of various ARD stakeholders for more relevant research outcomes
- Has potential to generate self-employment for farmers

b) Gender issues in local innovation

Focusing on gender issues within local innovation processes, participants through a group exercise described the different activities that men, women – jointly or individually – juggle with in the household, on the farm and in the community.

During this discussion, the participants noted the following:

- Women clearly do more work than men although this is often not recognised.
- Women's contribution/efforts need to be acknowledged.
- When talking about the work of men and women, the involvement of young men and women and of boys and girls needs to be taken into account.
- Local innovations need to be analysed from a gender perspective but key questions for such analysis are needed.
- Local innovations need to be examined to ensure that they are gender responsive.
- Documentation of local innovation needs to be improved with respect to gender analysis.
- Off-farm income-generating activities of women need to be considered while scouting for local innovations.
- As women's involvement in the household reduces, their involvement on the farm and in the community increases.

The participants saw the importance of gender analysis in examining the differential effects of local innovations on men and women and to ensure that they disadvantaged neither men nor women.

c) The gender lens

Participants were taken through the following four gender dimensions and their applications in analysing gender issues:

- **Division of labour**
How has the local innovation changed the division of labour/ labour allocation within the household? Who does what? Who is performing most of the activities? And where?
- **Access to/ control over resources**
How has the local innovation changed/influenced control over resources? Who owns resources – assets, land, information etc.? Who benefits from the resources?

- **Decision-making**
Who has contributed to decision-making in the context of this local innovation? How? Who decides on sharing of tasks – which family member will perform which activity? Who has a say at each stage?
- **Norms**
Which gender has the local innovation challenged? What assumptions determine who does what? What assumptions decide the value of who does what?

d) Integrating gender in farmer-led joint research

The quick analysis of gender issues using a gender lens gave the participants more insight into how gender affects local innovation processes and vice versa. In four groups (G1–G4), participants used the gender-lens technique to analyse local innovations as tabulated below:

<p>G1/G2: Fruit fly trap, Kisumu, woman farmer</p> <p>The fruit trees are owned by the man. The woman manages the trees on a daily basis and came up with this innovation for which she got permission from the man. The woman contributes her labour to prepare and install the traps. The innovation has helped to reduce fruit fly attacks and has resulted in more fruits to sell and more household income. The income is still controlled by the man. Culturally, it is not acceptable for women to climb trees. As such, the woman relies on her husband or son to hang up the traps and bring them down when necessary. Though the innovation is by the woman, it has been accepted by the man and put to use. This has given the woman confidence to contribute other ideas to the man – for example, she has been able to influence her husband to spend some of the additional income on home improvements. The woman is now attending innovators’ meetings, sometimes with the man and sometime on her own.</p>	<p>G3: Fortification of goat feed by a group of innovators</p> <p>The goat feed mix is an innovation by a man using locally available plants to increase body weight and milk production of the animals. This innovation was further improved through a process of joint research. The innovator is a member of a group of innovators who are now involved in commercialising this product. The men do the formulation of the feed. Both men and women collect the plants/material required for making the feed. Sales of the feed are done by both men and women, although the men make decisions on the money from the sales. Women sell the goat milk and have control over the income. Sharing of tasks in the entire process has meant that women rely less on men and have gained more control in the enterprise. For example, women are now involved in feed sales and don’t need to get permission from the men.</p>
<p>G4: Irrigated sack gardening, Makueni, woman innovator</p> <p>Sack gardening is fairly common and is used for increasing the supply of vegetables in limited spaces. This woman innovator has found a way to irrigate the sacks and maintain optimal levels of soil moisture. The innovation has reduced the woman’s labour and time spent in watering the sacks. The sack garden provides a steady supply of vegetables that are consumed by the family and the woman does not need to spend time looking for vegetables and buying them from the market. The woman owns the produce, sells the surplus and earns an income which is her own. The innovation addresses the issue of land ownership in that she does not need the man to allocate a parcel of land for a kitchen garden. The woman is no longer a provider of labour but an owner of a sack-garden enterprise. In fact, she has added more sacks to expand her garden and diversified the crops/production. Younger men seem to be more interested because they feel it is a more ‘fancy’ garden because of the irrigation system that has been incorporated. This may attract them to be involved in irrigated sack gardening.</p>	

The workshop also had a one-day field visit to various innovators at the Makueni action-learning site.



Workshop on Gender Mainstreaming in Farmer-Led Research at Methodist Resort and Conference Centre, Nairobi, Kenya

2.6 Farmer-Led Innovators Association of Kenya (FALIA-K)

The Farmer-led Innovators Association of Kenya (FALIA-K) was founded on 29 May 2013 by a group of 15 Kenyan innovators during the Eastern African Farmer Innovation Fair. It aimed at establishing a legally recognised platform for local innovators to promote indigenous technical knowledge and innovation towards food and nutrition security.

In June 2018, the association convened a community sensitisation meeting in Nyakach, Kisumu County, to promote local innovation for food security and nutritional diversity. The meeting was graced by A Growing Culture’s president, Mr Loren Cardeli. A number of local innovations were documented, among them ¹LOFODA-G meal. The association received a donation of a “Screw Pelletizing” machine from PELUM Kenya. The machine has since enabled the Nyando Lofoda Enterprises (formed by dairy goat farmers) to produce LOFODA-G meal pellets. First samples of the pellets were showcased during the International Farmer Innovation Day held in Kisumu.

On 18 December, a team from ILRI paid a courtesy call to the LOFODA-G meal innovators. The team was impressed by the work being done and advised them to also explore locally formulated fishmeal, an idea about which the association is very passionate.

2.7 Difficulties/challenges

Limited funds: The funds available are strictly for the Proli-FaNS project. This limits the operation and execution of other activities of the platform covering other areas of the country, especially continuing to support areas where PK worked before through other projects, such as in Baringo, Mwingi, Busia and Nyando.

2.8 Perspectives / Way forward

Strengthening resource mobilisation: PK therefore intends to be more aggressive and improve on its resource mobilisation through approaching various donors locally and internationally.

Advocacy: To promote the PID concept especially at the country level through brochures.

Documentation: PK has a lot of information that can be used to develop various publications, e.g. booklets and brochures on local innovation and PID. This will also provide support in creating awareness and advocacy, and will help publicise PK both locally and internationally.

¹ Locally Formulated Dairy Goat Meal (LOFODA-G Meal) is a powder made from chopped and dried fresh fodder collected locally. These ground feedstuffs are mixed in specific standardised ratios so as to provide for all the nutrients required by a dairy goat. This local innovation aims at maximising profit for the dairy goat farmer.

Networking: Strengthen the PK network by increasing its membership as a way of enhancing resource mobilisation, promoting PID and widening the scope for information sharing with a view to efficacious policy influencing.

Capacity building: Strengthening capacity of members, LSCs and innovators, by involving institutions of higher learning etc.

3. Self-assessment of network functioning

- i Extent of reaching goals and objectives of CP: Overall, the CP has endeavoured to reach its goals and objectives, especially through the implementation of the Proli-FaNS project. However, the CP needs to make more efforts in terms of resource mobilisation and networking.
- ii Governance at CP level & functioning of CP secretariat: The CP has a functional NSC that has endeavoured to meet regularly (on a quarterly basis). The NSC has supported the coordination of the CP and the implementation of its activities. The CP has established LSCs in the sub-counties where it is operating. The LSCs have had regular meetings, whose deliberations were crucial for the successful operation of PK's activities. The meetings coupled with good communications have strengthened the partnership. The Secretariat is functional with a full-time National Coordinator, who is supported by the host organisation (World Neighbors) and the NSC.
- iii Relationship with others CPs, (Sub) Regional Coordinator, International Support Team and Prolinnova Oversight Group (POG): The CP has had a good working relationship with other CPs, the IST and the POG. For instance, working with other CPs (Uganda, Tanzania and South Africa), PK is currently involved in developing a multi-CP proposal for the AFRIDIETS-Lab project. In addition, PK hosted the annual African CPs meeting that further strengthened the relationship with the CP, IST and POG and networking with other CPs in Africa.
- iv Achievements in terms of capacity building: Locally, PK has continued to undertake capacity-building sessions, especially on local innovation and PID at the local level, through integrating the capacity-building sessions within the various other activities and meetings. In addition, the workshop on Gender Mainstreaming in Farmer-Led Research hosted by the CP and facilitated by Chesha and Mona from the IST was very timely for PK, especially for those partners implementing the Proli-FaNS project. The workshop helped integrate gender issues into the project activities.

4. Conclusion

There is a great improvement in the level of appreciation of local innovation processes by local communities of Kisumu and Makueni Counties and their respective County Governments. The fact that local community members who initially shied away from coming up with various innovations and/or sharing them are currently doing so is a clear indication that the appreciation level has increased. The monitoring and evaluation by the CP has noted improved dietary diversification among the local innovators.

The increased level of appreciation and improved dietary diversification are also attributed to the joint experimentation process. Through mutual learning between the actors involved, the capacity of many community members has been developed as evidenced in their participation not only in PID processes but also related to local governance issues. A progressive increase in the number of new local innovations identified has been recorded since the beginning of the joint experimentation, thus an indication of boosted confidence.