Jennifer Atieno is a woman entrepreneur and a farmer in Kisumu. She came to know about the Women Food Entrepreneurs research project in the first field familiarization visits by the PhD researchers with community based women groups in Kisumu city slums. In January 2018, she participated in the Food and Business Knowledge Platform Second Mid Term Review meeting in Nairobi and this was her comment: “I learnt new ways on how as a farmer and entrepreneur I can improve food and nutrition plus generate income. The meeting also enlightened me on new food preservation methods.”

When asked about her experience at the meeting, she noted that food and nutrition insecurity is a challenge being faced by both women entrepreneurs and groups in Kenya and Burkina Faso and it is good that there is adequate information to counter this problem.

In her opinion, there are many ways to boost food and nutrition security in Kisumu especially among farmers. The main ones being creation of accessible markets and storage facilities for produce specially during rainy seasons.

As a parting shot, this is what she had to say about to the Women Food Entrepreneurs project team: “I applaud the work that the project team is doing especially in empowering and educating women entrepreneurs on the importance of food hygiene, nutrition and food security in Kisumu County and would wish to urge them to continue with the good work. I also wish to thank the WFE team for giving me an opportunity to attend the MTR meeting as it was an eye opener to me as a farmer and woman entrepreneur.”
Agriculture and food-related activities are important in Nyalenda and Obunga informal settlements in Kisumu county. Almost a third of the population is involved in farming activities. The crops mainly grown are those providing constant income, such as kales and maize. The two most important factors that shape food consumption in the settlements is availability and affordability. Lifestyle, culture and introduced customs play a role as well. The most common plate in Kisumu is made of ugali and vegetables, mostly kales. Meat is rarely consumed, but due to their preferences and culture, people eat fish. In both slums, food hygiene is highlighted because some food-related diseases are jeopardizing the health of people. This study identified some hindrances namely poor quality of water, precarious sanitation systems, poor food handling and processing methods.

Kisumu inhabitants have access, on average, to a diverse diet Household Dietary Diversity Score (HDDS=7.48) and to an acceptable food consumption status Food Consumption Score (FCS=40). However, food and nutrition inequality is revealed. The number of different food items and the diversity of food groups consumed vary widely among the population.

The Women Food Entrepreneurs research project builds on an inclusive business model that can be operationalized in a widespread poverty context and conceptualized in the scientific literature. In the project, the research team identified opportunities, gender-specific obstacles and constraints being faced by Women Food Entrepreneurial groups in both study sites. The obstacles and constraints are either 'external' (poverty conditions, financial resources, access to markets and time, among others) or 'internal' to the WFE groups like unequal relationships within groups preventing women to actively participate in decision making and putting their priorities on the agenda.

Some of the opportunities that the project identified are women's sensory knowledge on soil and food quality, cultural tastes, food processing and preservation techniques, and a basic understanding of what a nutritious food plate contains. We were able to assess a convergence of scientific knowledge and WFEs sensory knowledge of the soil quality but current agricultural management practices to improve the soils, ranging from inter-cropping to mixing chemical fertilizer with organic compost, proved ineffective.

The WFE team also faced challenges such as incomplete knowledge of soil amendment practices and techniques (incompatible practices are applied to solve soil fertility problems), travelling of knowledge in small social circles, combining household chores and childcare with farming and food business (especially for single mothers), access to market information and supportive business partners.

In the process of knowledge sharing and laying the foundations of co-creation, local government and private sector stakeholders have become more attuned to WFEs diversified priorities to enhance value addition, food security and income opportunities. Additionally, the WFE groups have become more aware of the commonality of the obstacles and constraints that are shared across different groups in producing, processing and marketing food commodities in the urban and peri-urban slums. This has induced them to seek strength in the collective by identifying and establishing new linkages with other WFE groups, private business, and local government stakeholders. In conclusion, all stakeholders involved have developed new understanding about a range of sustainable soil amendments that can be locally sourced either from organic manure that some WFEs self-produce already or from local mines in the form of rock dust (the waste product). We have also conducted soil test and rock dust analysis and the results will be shared with the WFE farmers groups, the local government and business stakeholders in a capacity building workshop.
Summary of interview and discussion during the mid-term meeting of the GCP2 projects

To understand Global Challenges Programme (GCP), the programme committee conducted a progress and performance interview of the project. The questions were prepared by the Food & Business Research Programme Committee (PC) and the NWO-WOTRO bureau and relate to the self-assessment report of the project.

Q: In the report, there is a lot of information on policy and research on agricultural production and food security, but less on the production side. Please elaborate.

A: Agriculture is the core of the food and nutrition survey in Kenya and Burkina Faso, which will be monitored over time. The project started by quantifying and characterising the crops that are grown in the project site and examines the connection between marketing and farmers. It starts from the level of farmers and then moves to production side. Irrigation is a challenge as water is inadequate during dry periods in Burkina Faso and also in Kisumu. The consortium is going to follow up on production. We also intend to add temporary partners, the Kenya Agricultural Research and Livestock Organization (KARLO) and Kenya Industrial Research and Development Institute (KIRDI), who were invited to the first stakeholder meeting to identify challenges that might be addressed for sustainable food production.

Q: Apart from soil and water being added as a focus, what other issue has been included?

A: Food hygiene is an area not previously included in the beginning of the project. Food hygiene starts from the production stage to the sources of water, which are sometimes polluted due to lack of sanitation in densely populated areas. The project now looks at how water influences food hygiene. In a bid to meet the standards for marketing, which is also part of agronomy, processing and post-harvest handling need to be considered. This may result to a boom in production and reduced prices in local market due to increase in availability. The challenge is how set competitive price other markets. Our approach, the Inclusive Business Model relies on knowledge and priorities of marginalized groups, which starts at the bottom of the pyramid aiming to be economically viable, socially and environmentally sustainable, and technically feasible – taking the circumstances of women producers, processors and sellers as starting point.

Q: Please explain how you began working with the women groups in Kisumu and Burkina Faso and progress update

A: We started working with two groups in Kisumu and four in Burkina Faso. A group assessment was conducted to look at group dynamics and regular meetings were organized. The PhD students worked with the groups to gather data through focus group discussions and participatory approaches. Currently, one PhD student is carrying out tests with the groups to provide knowledge on soil to the groups. The women hold a lot of ‘soft knowledge’ on the quality of food and soils. This was compared to scientific/laboratory knowledge though many overlaps and gaps were found. The consortium looked into the agricultural management procedures like what techniques do women use and why? Through an interdisciplinary approach different motivations for intercropping were found not only to improve the soil, but also to spread income more evenly over the year. Our next step is to design evidence based tools to be used as a training course with women food entrepreneurial groups, which will be linked up to exchange visits between groups in the respective countries. Thirdly, the consortium is looking for more resources in efforts to connect

The Kenyan group with those in Burkina Faso. Though the context is different, but barriers and constraints are similar. Presently, stocktaking of processing techniques and knowledge is being conducted. The consortium also plans to organize market fares to invite business communities, who were already invited to stakeholder meetings and seeks to connect with the women groups in addressing policy gaps. Moreover, in order to build a working relationship with the women groups, the consortium has shared the soil results studies with the groups and has co-created a seasonal harvesting calendar with the women.

Q: Are you only targeting marketing only? How about food security of the women themselves and their families?

A: Normally the women produce on subsistence level only but when there are higher volumes of productions they would still have the possibility to either eat themselves or sell. By contributing to the availability of improved food, the project is likely to improve food security. The consortium seeks to enhance income generation and diversity in nutrition. However, some food insecurities remain: if income increases this doesn’t automatically improve nutrition, but this development is monitored. How is income earned utilized? The consortium will thus have concrete data on how this changes over time, which would give feedback into development of the business model.

Q: Based on the changes made and as you move to the next phase of the project, has the Impact Pathways been revisited?

A: The project still runs on the same Impact Pathway (IP) in broad lines, but some emphasis has shifted as soils are being investigated. However,
agronomy is gaining more importance. For soils, the consortium is looking at sustainability issues with regard to fertilizers. An addition to the IP are the agricultural managing practices that are brought back, that is looking at limiting factors namely compost, vertical gardens and Burkina Faso ecological farming. Exchange visits will be done to exchange ideas. Additionally, the team is looking into organic production as already some women groups are producing and selling organically produced products to external markets. Urban agriculture being a hindrance to growing cities, there is need to provide possible alternative solutions to production. In due time, city markets’ demand and population will rise thus, land fertility and asset will also need to be addressed with policy makers.

Q: Developing your business model implies that the impact pathway could represent steps and constraints in the development of the business model. Please explain.

A: Many workshops and activities have been organized. These workshops have been considered very useful as they create awareness on how to generate income from farming. The expectation of the women is to be able to use the information to improve farming, processing and marketing. One challenge is drought and farming in dry periods due to lack of a proper irrigation plan. Farming along the lake is another problem because the wildlife attack the fields and destroy vegetables. Another challenge is marketing: there is an issue of taxation from county government and market space hence the women must go to the market early to be able to put up market stalls.

UPCOMING ACTIVITIES

1. Capacity building with women groups
2. Stakeholder feedback workshop
3. Country validation workshops
4. Survey production systems in Kisumu