



ATSAF - CGIAR++ Junior Scientists Program Final Report

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Internship/Fieldwork Report

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1 Introduction

This report is in relation to the activities carried out from December 2018 to March 2019 under the CGIAR ATSAF Junior scientist program. This period was spent doing an internship at the IITA under the auspices of DITSL in their Upgrade plus project. My work in the project involved fieldwork to collect data which I will use in writing my master's thesis; a requirement for the completion for my MSc. Degree in Sustainable international Agriculture. The report will follow this structure: Following the introduction, I will describe the upgrade plus project and the work package I was involved in, and then with a scientific report on the research (description of my objectives and a breakdown of the my specific tasks, the methods used and preliminary findings), after which I will write about my experience as an IITA intern, and then my overall reflection on the Junior scientist program.

UPGRADE PLUS Project

The Upgrade plus project is a transdisciplinary research aimed at co-creating a solution to the multidimensional problem of malnutrition, financial insecurity and waste that concerns Sub-Saharan Africa with a particular focus on West Africa. The project aims to develop a decentralized, solar powered processing machine that will promote hygienic packaging and labeling of products produced by women groups using under-utilized species (USs). USs as defined by the project is limited to crop species, which is not currently utilized to its full potential. The project's focus on women is based on a dual premise of the role of women as custodians of knowledge of rare species and also their roles as caretakers of their household. The project seeks to take a comprehensive approach to achieving its aims of

- Developing small modular, de-centralized processing units from locally sourced materials
- Empowering women through capacity building of women's groups

- Improving the nutrition status of children, lactating and pregnant women and through innovative utilization of nutrient rich USs.
- Encouraging the multiplicity of knowledge through the training of local artisans in the development of the processing units and promoting the transfer of knowledge by the women's groups to the bigger community

The upgrade plus project brought together partners from four countries: German Institute for Tropical and Sub-Tropical Agriculture (DITSL) (Germany), Innotech Ingenieursgesellschaft mbH (Germany), University for Development Studies (UDS) (Ghana), Njala University (NU) (Sierra Leone), National Horticultural Research Institute (NIHORT) (Nigeria) and the University of Kassel as the coordination body. The project is made up of 8 interdependent work packages tasked with the achievement with a section of the project objectives. My involvement in the project was limited to Work package 6 of the project which was tasked with developing innovative capacity building strategies to support women's group processing businesses. My specific contributions were within task 2 of the mandate for Work package 6 which was the joint definition of processing related goals, needs and constraints. My fieldwork for the project was carried out in south-western Nigeria which is one of the project work areas. The other project work areas are Sierra Leone and Ghana.

2 Purpose, Objectives and Tasks

My work within the Upgrade plus project is limited to the second task of Work package 6 (WP6), which is the joint definition of processing related goals, constraints and needs. This task was achieved through an analysis of the entrepreneurial potential of women groups which mirrored the development of a business plan for a commodity based on a USs. The analysis was done through the realization of three broad objectives which are:

- To co-identify the USs of interest and the commodity to be produced.
- To reveal the motivations and expectations of the women with regards the collaboration; co-development of a working goal for the group.
- To determine knowledge gaps, constraints, and opportunities faced by the groups with respect to the proposed business development
- To co-create a business plan and subsequently a detailed outline of action to implement that addresses how to make use of opportunities and how to overcome the identified knowledge gaps and constraints.

These objectives were further elaborated into specific steps:

Objective A

Step 1: Co-identify the USs of interest

Step 2: Women decide the commodity to be produced from the USs

Objective B

Step 3: Elicit motives and expectations

Step 4: Sharing of experiences between the women to establish knowledge pool
knowledge gaps

Objective C

Step 5: Closing of knowledge gaps through learning from the experiences of an expert

Step 6: Co-realization of constraints and needs with regards to business development

Step 7: Trial production of the product to encourage experiential learning

Step 8: SWOT analysis to identify strengths, weaknesses, opportunities and threats to the business.

Objective C

Step 9: Co-design action plan for business development

Step 10: Realize and address obstacles in the process of business development

Step 11: Video proposal where women explain their business plan

3 Methodology

Due to the multidimensionality of the project objectives, this research was transdisciplinary in nature, that is, it involved the necessary stakeholders in the problem definition and problem solving (Angelstam et al. 2013). It followed a qualitative approach as it aimed to understand the 'how' and 'why' of the contexts of the women. The collaborative learning (CL) framework designed by Restrepo, Lelea, and Christinck (2014), describes learning within groups as a series of sequential activities which follow an iterative process of: a) team building to institutionalize the collaboration, followed by b) the dialogue phase where expectations and experiences are shared, c) the discovery phase where the co-creation of knowledge within the group is fine-tuned through experimentation, reflection, adjustment and other problem-solving to ensure that it is aligned with the constraints of the context, and finally d) the application of created knowledge into a practice that is socially recognized and functions within a specific place. The CL framework guided my interaction with the women's groups as my research elaborated the phases of dialogue and discovery. This is highlighted in the steps stated above: steps 3 and 4 are within the dialogue phase of the learning process, while steps 5-10 are within the discovery phase of the project.

The data was collected through whole group sessions (meetings) with the women, individual interviews and trial production sessions. The application of relevant Participatory Rural Appraisal (PRA) tools assisted to facilitate the interaction where active participation was low. The data collected was recorded through audio recordings, field notes and photo documentation.

The 4 women groups involved in the project are referred to by the names of their community: Ojedeji, Saanu in Akinyele local government area (closer to Ibadan); Osanetu and Seraphim in Iseyin Local government area (farther from Ibadan). The 4 groups are quite similar even though they are located far apart, with the women having similar occupations, age distribution, cultural beliefs, binary religious system (Christianity and Islam) and daily activities.

4 Overview of work done

The preliminary findings before analysis for this research is stated in this session in order of previously stated steps. My fieldwork originally involved consistent interactions with 4 women groups in south-western Nigeria. The groups were chosen after the conclusion of the first phase of the project. I was able to conduct 25 group meetings and 12 individual interviews with the women groups with the support of the project's in-country coordinator and field assistants. The findings stated in this report are preliminary, yet to be analysed and is basically just a report on the data collected.

The first step of selecting the USs to work with was done through a priority setting activity that allowed the women to decide for themselves what crops are classified as USs. The women stated their criteria for choosing a certain crop and discussed among themselves before the final crop was selected. The crops identified in the groups were Sweet potato, Cocoyam and lemongrass, with 2 groups choosing sweet potato, 1 group choosing sweet potato and cocoyam and the last group choosing lemon grass.

The next step of deciding what commodity to produce was achieved through discussion with the women and the researchers introducing products made from similar USs to the women. Women could share ideas, defend their ideas with reason for choosing a certain commodity thereby persuading or dissuading other group members. After this, voting was done to make the final decision. Women indicated support of an idea by a show of hands. The products selected by the groups involve sweet potato chips, Cocoyam/sweet potato flour for fufu, sweet potato baking flour and lemon grass tea.

The next step was to elicit motives and expectations with respect to the possibility of business development centred on a USs. A majority of the women identified profit as their motivation while others identified food security, and some highlighted the need to send their children to school with the profit made. For expectations, the women spoke in general terms rather than in the specific, with one woman speaking along the lines of business being filled with ups and downs and there are no assurances.

Following the identification of motives and expectations, the next step was to establish a knowledge pool on business development, basically, determining how much the women know about business. The project understands that the women are knowledgeable and active (rather than passive) actors in their communities. In all groups, a majority of the

women conducted one form of business or the other, and hence, there was a wealth of information collected.

From the knowledge pool, it was possible to co-identify with the women the knowledge gaps with respect to the production of the commodity from the USs. The logic is that the women may be conversant in the palm oil processing business but have little technical and business know-how on sweet potato chips. To close this gap, an expert was invited to speak to the women on the specific business they are interested in.

Following the interaction with the expert, the women could clearly define their constraints, needs and resources available for the development of their business. The women were then able to realistically decide for themselves whether or not they are interested in going into the business. The next step was then to plan and execute a trial session for the production of the commodity. The trial session was done with or without an expert present. The session provided the women with a practical learning experience that allowed for experiential learning.

The next step was to conduct a SWOT analysis with the women. This step allowed the women to realise the opportunities and possibilities for their business. After this, an action plan was discussed with the women. This step fundamentally summarizes all other steps (which are principally steps in the action plan for business development) while also identifying and discussing solutions to possible obstacles. These last steps were not conducted with all the groups during my fieldwork but will be continued by other team members in the project.

It is important to note that the steps were not always approached the same way in all four groups. In some cases, some groups moved at a faster pace than others, with groups responding differently to the collaborative learning process.

5 Activities outside fieldwork

International Institute of Tropical Agriculture (IITA). Ibadan, Nigeria

My work with the IITA was limited to the use of the institute's resources such as the library and establishing connections with some of the staff. It was interesting to learn from my peers who were also writing their master's thesis with the Institute. I was also fortunate to have talks with a PhD student with interesting insights on the nutritional benefits of cassava fufu. I also tried to establish a link with Harvest Plus (an ongoing project at the IITA which was working with Orange Fleshed Sweet Potato (OFSP)) to possibly support our interested women groups with OFSP planting material if necessary.

University of Ibadan (UI). Ibadan, Nigeria

At the University of Ibadan, I was given permission to make use of the libraries of the African studies department and Women's Research and Documentation Centre. This was important because I needed to learn and understand more about the Yoruba women of

southwestern Nigeria who were the target group of the project. At UI, through my established connections, I also attended the project writing workshop for post-graduate students at the nutrition department of the university.

National Horticultural Research Institute (NIHORT). Ibadan, Nigeria

At NIHORT, my activity involved consistent meetings with the Upgrade plus work package 4 leader. As the project is transdisciplinary in nature, it was important to ensure proper and efficient communication with other work packages. I ensured the NIHORT partners were aware of my activities, obstacles and progress. I was also able to get guidance and advice where necessary.

6 Lessons learnt

I have experienced so much growth these past few months while working in the Upgrade plus project and interning at the IITA. I learnt more about myself as a person, I understand my behaviour under pressure, I learnt how to better handle conflicts and how to get the best from the people working in your team. I understand better now the strength that comes when your target group is encouraged to take charge of solving their problems while researchers take an observatory/supervisory role. Although I had spent some time in the rural areas in the past, it was my first time really experiencing how daily life goes by in rural communities in south-western Nigeria. What I realized about the people was that they are content, rather than complacent; they are knowledgeable and well informed about their context and therefore able to adapt when necessary.

On the career front, my experiences these past months has clearly defined a career path in impact-oriented development research. Visiting the IITA, and reading about some of the ongoing research, I am more motivated to contribute to the knowledge pool particularly as a young African female researcher with a unique worldview.

In all, the months spent in this project can be generalised as an interesting learning experience filled with the great memories and even greater opportunities to meet and learn from more knowledgeable senior colleagues, my peers in different fields and also from the rural people who live their lives to the best of their abilities.

7 References

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