

Report Internship at Obrobibini Peace Complex (OPC) Busua

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State at arrival

Land

When we arrived, around 25 % of the land was cleared and one corner of around 400 m² was dedicated as garden area. In these 400 square meters, bananas, plantains and taros (cocoyam) were planted on the border space. The middle space was planted with okras that were totally eaten by insects. The garden area was full of weeds. Few beds has been defined around the okras and planted with squashes and cucumbers, also heavily attacked by insects. The soil of theses beds has not been worked before planting (see pictures in part D) and the soils properties/health was poor. The rest of the garden area was covered with weed and the soil was heavily compacted. The planted trees were growing, though most of their leaves were eaten. Spatial and temporal conceptualization of vegetable production was absent.

Thus we observed that no maintenance, fertilization or protection measures have been implemented. Abundance of weeds and insects as well as water stress symptoms were good indicators of the garden state.

Team

When we arrived, the team was dispatched. Kwame Junior and Joe Man were at Busua and ready to work for OPC. No common work has been achieved in the weeks prior our arrival. Bobo Joe and Pages joined us few weeks later.

Concerning the organisation of OPC, rules and hierarchy has been settled though not always respected. Lacking of rigor concerning schedules, food and financial management were important point that were revealed to us rather quickly. These points were quickly ameliorated after several discussions with OPC president. He settled measure to ensure the continuation good and trustfully work atmosphere.

Our work at OPC

Land

The objectives of our internship in OPC Busua were the following

- Developing a feasible cultural calendar
- Raising seedlings
- Terracing the area where the land is already cleared
- Planning and setting up an irrigation system (pump, poly-tank, tubes)
- Composting and green manuring with live *Moringa* and *Gliricidia* trees, adequate mulching
- Planting
- Biological pest control
- Build first permanent structures

After arrival, our first actions were to clear and maintain the garden already in place. Routine tasks such as weeding, watering and spraying different organic preparations on the growing plants were achieved. Moreover we started to tackle seriously the soil fertility issues by building a compost and enhancing the beds with poultry manure and palm shafts. Manual and visual soil sample and assessment were performed. Meanwhile the rest of the team was occupied to clear OPC land, and this mostly the area surrounding the garden. The next step was to build a nursery and raise seedlings from Swiss and Ghanaian seeds (mostly tomatoes, eggplant, cucumbers, cabbages, beetroots and chillies). At this state, the special and temporal conceptualization of the garden started. Soil was worked and fertilized in order to enhance its properties. Beds were build and designed to carry a drip irrigation system. Vegetable production in beds was chosen because it's a suitable production system for intense vegetable production. At this time, we begin to plant the first seedlings while the rest of the team was still clearing the land. When they cleared more than 80% of the land, they joined us in the beds preparation. Assessments of the vegetables varieties trial were regularly performed from this time. Installation of a wire structure for climbing vegetables was the starting point for the intensive. Because of their body strength, Paiges and Bobo were mostly making beds and watering while we performed maintenance, enhancement and assessment work in the vegetable field. At this time, a larger nursery was build to reach the seedling production required by the beds surface. In accordance to our previous observations on the varieties assessment trial, a first wave of seedlings

was planted in the available beds. The plantation time coincides also with the beginning of an effective biological pest and disease control with an efficient Swiss spraying machine (garlic, chilli, neem decoctions, soap and baking soda). The schedule, decoction recipes and application techniques of the biological pest and disease control resulted from previous field observations and trial as well as an intense literature research.

The watering was very regularly achieved with watering cans as the irrigation system was conceptualized but not realized (solar panel were missing). Weeding, watering, protecting the growing vegetables and planting the new ones were our daily activities. Meanwhile the rest of the team started to enlarge the garden area by preparing the first beds outside the actual garden area. Thus, at this time garden begun its expansion to the terracing area. The next important step was to install the pump and the solar panel. The irrigation system installation trial followed few days after pump installation.

Hence we can say that all the previously mentioned objectives were reached except the last one "Build the first permanent concrete structures". This task will be achieved in a close future by other persons, surely more competent than us for building aspects. Concerning the culture calendar, due to the limited time we could spend in OPC, we were not able to define one. We listed rules for crop rotation and teach them to OPC team. From these rules could, a cultural calendar could be conceptualized. More than the crop rotation itself, the market, climate and the farm funds have to be taken in account for the planning of cultural calendar.

The terracing has just started and could easily be achieved one we have left. About the irrigation system, a lot of efforts were made to install it successfully. The only aspect that we couldn't target is the polytank. However, planning of temporary water storage near the pumping area will be discussed with Moses. Although many improvements have been brought in term of fertilization, the compost and compost juice need time to form. Assessment of their quality and effects is therefore so far not possible. Moreover because of weather conditions, the firewood supposing to make biochar was not drying. Therefore biochar production, use and effect assessment were also not makeable.

At the end of our time in OPC, raising new seedlings as well as planting them were almost daily activities and this enabled the garden to develop well. Besides finding an effective biological pest management was quite challenging and although we defined a precise schedule of application of garlic, chilli and neem decoctions, it still needs a daily assessment of the pest situation on the field.

Team

As said previously, the team situation was disorganized at our arrival. The working team consisted of Joe Man and Kwame Senior and Kwame Junior for a short time. Bobo Joe soon joined us with Pages while Kwame Senior left for familial issues. During this period we try to coordinate and organize the team to reach a daily routine. The weekly meetings were an important part of this management. However we soon noticed that there were some disparaging conflicts between the members of the team because of money issues. Moreover the situation regarding our role and input in the team was not clear. Hence some clarifications and restructuration were needed. Constant contact with the OPC president helped to find solution to the revealed issues.

After the visit of OPC president, the situation quite changed. As all the members get now the same daily payment, it was much easier to have a united and motivated team. The both Kwame left few weeks after our arrival and Joe Man was also not in Busua for a long time. Therefore most of the farm work was achieved by Bobo and Pages and us. From our side, the budgeting of OPC food helped us a lot to manage this aspect and relieved us from financial pressure. Thus, we focused our energy on the goals set at the begging of the internship. We were able to settle an efficient daily routine starting at 7h with breakfast making, departure to the field around 8h15 and come back from the field between 14h and 15h.

Just before Delphine went to Gosao for the cocoa research project, we had an important meeting concerning the organisation of OPC. Important remainder and changes have been brought to OPC though our on field observation. Moreover, we were the first external people staying so long in OPC. This revealed our importance as observer. Indeed, more than bringing knowledge and learning from OPC people, we were able to point managerial, structural and functional problem, to relay them to OPC president and suggest solution.

Continuation after our departure

Land

In order to continue to have a productive a fruitful garden, the following tasks need to be achieved on the field, most of them daily:

- Build a raffia house to store the tools
- Weed the garden
- Daily pest, disease and water supply assessment
- Apply plant protection products in accordance to the spraying schedule
- Water the plants
- Pruning and binding the climbing vegetables
- Make new beds
- Keep the nursery running: planting new seeds, taking the ready seedlings out
- Feed the compost
- Harvest the ready vegetables
- Try other varieties, vegetables types
- Multiply Gliricidia and Moringa tree and plant them around
- Maintain soil fertility: de crusting, watering, bean mulch, fertilization though irrigation

Furthermore administrative tasks need also to be achieved on a regular basis:

- Make and maintain a tools inventory
- Make and maintain a harvest record
- Make and maintain a sell record
- Check for marketing options: where and to who selling the vegetables

Team

Concerning the organisation of the team, it has been clarified in the meeting of the 28.10.2018. The new organisation should bring professionalism, regularity, and consciousness of responsibilities in the team. The period between our departure and the time that OPC president comes in March has been defined as a test period. Thus, this is the time for OPC member to show their abilities and competencies to OPC president. If the management and communication of OPC Busua are efficient, the farm productive and sustainable, the president may keep these people for future important OPC positions. In the case of dysfunction, these people should be replaced by other competent ones as soon as the president is in Ghana.

Comments on OPC team members

Joe man

Joeman is a very relax guy, good to listen, understand and manage African way of acting. He is always the guy to drive us everywhere for OPC matter and present for us when we really need him. In contrary in Busua, he disappears often, so it is difficult to manage current tasks as he is not with the concerned people. Moreover, his way of communicating and managing are not sufficient for the position he occupies. We always have to ask for information and he is not recording necessary OPC matters. Moreover, it is hard to have a constructive discussion as he does not understand and listen to the Obroni way of acting. In addition to that, he feels directly that we are reappraising his position or way of doing. For him, we are in Africa so the majority of the thing should be achieved in the Africa way. If he is not giving information, it is because he thinks that asking or reporting means that he is not suited or capable for his given tasks. However, keeping on repeating the things has finally led to small behaviour changes. Therefore we have hope that in the future, he will be able to performs as his position requested. He also told us that for him, there is not enough people to perform tasks demanded (was telling about need of a cook, mason, etc.).

Pages

Pages was rather quiet during our time in OPC but he was the most present guy. He was always cooking, washing the dishes, working hard on the field, really attentive to our comments and ready to change. He clearly does not want to take responsibilities and does not want to create issues. So far he seems really happy of how is OPC doing, proud of his work and really motivated to continue in OPC. He is aware that OPC helps him, he's therefore grateful and acknowledge our work. The guy wants to stay on board, we do not have to motivate him to stay. However, his English level was rather low, so communication with him was not always easy. Moreover, he is easily influenced; this means that Bobo was delegating a lot of tasks to him and used him to make demand about money. In conclusion, we are really happy of his participation and the works he is doing.

Bobo

Bobo is a smart guy, as far as it does not concern money. In one hand, he was rather not punctual, creating conflict, and not really doing was he was asked to do. In the other hand, he has a lot of knowledge and competencies, concerning some technical works, food or medicine. Concretely on field, when he had a task to do and we could supervise that, he was working with a lot of energy and smile. Moreover, in some tasks such as shopping or information gathering, he was very active and taking initiatives which were much appreciated. He was also willing to teach us a lot about Ghana society and history. However, we also observed that he was delegating a lot of tasks and confronting a lot Joeman as the executive director of OPC. He also wanted to discuss a lot and trying to add his way of doing. For him, OPC and his motivation come from money meaning that his vision is sadly limited to the monetary aspects. Many issues are related to this matter. We also observed that he was using his long time friendship and relation with OPC president as a kind of privilege. Finally, we must admit that we saw a clear progression from the state when we arrived to the time we are leaving. The directives of OPC president were helping him a lot and we already saw the results.

Kwame Junior

As we saw him (more Delphine than Pablo actually) only three weeks, this is maybe not the real picture of that guy. Kwame is the guy with the most energy of the team. He was the first awake, cooking, washing, working really hard and in a professional way. He was punctual and doing the things he said he will do. He was very communicative, willing to teach us a lot concerning Ghana and Africa life. He was very thankful to OPC and interested in our knowledge. However, for some topics such as slash and burning agriculture or the way of cooking rice, he could be very close minded to new idea. Nevertheless, we were always able to discuss with him and exchange ideas.

Kwame Senior

As we saw him (more Delphine than Pablo actually) only two weeks, this is maybe not the real picture of that guy. Kwame was very quiet and very independent. He never took part of OPC meals and arranged himself about that. He did not wanted to take responsibilities but was really attentive and precise working guy. He was not the most punctual guy, but in two weeks this is hard to assess. The words quiet force could describe him very well.

Moses Awiagah

For the few days we have seen him, we could say that he is a very reliable person, willing to teach, and ready to learn. He has many agricultural and technical related skills. He is able to implement research work with rigor. He revealed many important points regarding the management of OPC. People like him are really needed on OPC ground. However, he is not participating to common tasks such as cooking or cleaning dishes.

D) Pictures



Picture 1: the cucumbers at our arrival



Picture 2: the garden at our arrival



Picture 3: the first weeding



Picture 4: the garden intensified

Picture 5: the garden before our departure