**the civil society fund**

**citizen participation intervention**

**Supporting refugee and host community farmers and schools in Uganda to increase production of new sources of nutritious food and generate income**

## Objective and relevance

The objective of the intervention is to ***strengthen the ability of schools and farmers’ associations in and around the Kyaka II refugee settlement to increase production of nutritious food and generate income***.

The project will pilot the production of innovative new produce with a large potential as a source of income and nutrition, through the production of edible insects for both human consumption and for sale as a component in animal feed. The intervention will work with farmers’ associations among both refugees and host communities to strengthen their ability to support farmers to generate income. In addition, the project will pilot production of mealworm in schools as a way to improve nutrition among school-age children.

The UN Food and Agriculture Organization (FAO) estimates that insects form part of the traditional diets of at least 2 billion people. More than 2,100 species have reportedly been used as food. Insects are a highly nutritious and healthy food source with high fat, protein, vitamin, fibre and mineral content. The vast majority of edible insects are harvested in the wild, and the concept of farming insects for food is relatively new, although there are examples of rearing of insects for human consumption in the tropics from South East Asia. Insect gathering and rearing as mini livestock at the household level or at an industrial scale can offer important livelihood opportunities for people in developing countries. Some of the poorest members of society, such as women and landless dwellers in urban and rural areas, can easily become involved in the cultivation, processing and sale of insects. These activities can directly improve their own diets as well as providing cash income. Insects can be directly and easily farmed with minimal technical or capital expenditure. Rearing insects also requires minimal land or market introduction efforts, as insects already form part of some local food cultures, including among the Congolese refugees and the local population in Western Uganda.

In Uganda, it is common to consume insects such as termites and edible grasshoppers (*Ruspolia nitidula*). Fried grasshoppers are considered a delicacy and are sold at high prices. Similarly, consumption of insects is very common in DR Congo, where most refugees in Western Uganda originate. In December 2018, we carried out a rapid assessment of the potential of rearing of mealworm for human consumption in the Kyaka II settlement in Western Uganda, testing samples of fried mealworm with Ugandans and host community members in four focus group discussions.[[1]](#footnote-1) Finally, there is great potential for insects to be used as the main protein content of some animal feed. Research from Kenya and Uganda found that replacing less than half of the fish meal in poultry feed with black soldier fly larvae meal led to a 25 percent better Return of Investment, when compared with the ordinary feed, which was 19 percent more expensive. The resulting chickens were the same in terms of size and taste of the meat.[[2]](#footnote-2) Other research in Uganda and Kenya has found similar positive results.[[3]](#footnote-3) However, the use of insect protein for animal feed remain underdeveloped.

***Problem description***

Refugees in Uganda have limited access to land and resources, and suffer from inadequate access to nutritious food. The large influx of refugees into Uganda is continuing to strain the resources of the humanitarian system, since it is impossible for the World Food Programme (WFP) to obtain sufficient support from donors to cover all needs. By any measure, the prevalence of food insecurity is very high in the refugee settlements. The intake of milk and other dairy products, animal protein, and fruit is extremely low, and the majority of refugee households subside on a meagre, undiversified diet consisting almost exclusively of staples, legumes, vegetables and oils.

Most refugees are living in extreme poverty, with around 56 per cent living on less than UGX 1,000 (US$0.26) per day and 79 per cent live on less than UGX 2,000 per day (US$0.52). Adjusted for purchasing power (PPP) this means that almost 80 per cent of the refugees survive on US$1.68 per day, below the internationally recognised extreme poverty line of US$1.90 per day.

Agriculture as a viable livelihood option is limited to a few people due to the small proportion of refugees that possess sufficient land for cultivation, despite the Ugandan government’s policy of providing refugees with small plots of land. There are also barriers to earning an income outside of agriculture. Only one percent of refugees are in salaried employment, and most refugees rely on food assistance or engage in irregular, casual employment as an additional income source, mainly as agricultural labourers in host communities or for refugees with more land within the settlement. Wages are low, usually between UGX 2,000 (US$ 0.5) and UGX 5,000 (US$ 1.3) per day.

There are better opportunities for self-employment and starting up businesses. While many of the refugee settlements are relatively isolated, the arrival of the refugees as well as the injection of cash into the settlements attract traders to these isolated areas and turn them into better functioning market economies. Refugees with prior business experience and business acumen are more likely to start up small businesses, although access to capital is a major barrier for most refugees.

***The context of the intervention.***

Uganda is hosting more than one million refugees, predominantly from South Sudan and DR Congo. This makes the refugee population in Uganda one of the largest in the world, with only Turkey and Pakistan hosting larger populations. Furthermore, the conflicts in both South Sudan and DR Congo are still escalating, and the UN expects more refugees to keep arriving in the coming years. There is no immediate end to these conflicts in sight, and many of the refugees can therefore be expected to remain in Uganda for many years, if not decades. The Ugandan government, together with development partners, is therefore emphasising the need to develop innovative income generating activities, which can lead to sustainable livelihoods for both refugees and host communities.

Kyaka II settlement is located in Western Uganda, in the district of Kyegegwa, about 200 kilometres west of the capital Kampala. The settlement has received a large new influx of Congolese refugees in 2019 and the population has increased from around 50,000 to now more than 110,000. While the vast majority of the population are Congolese, there are also around 5,000 refugees from Rwanda and Burundi. The land in the area is fertile and refugee farmers have previously had access to sufficient land to produce significant quantities of maize and other produce in the settlement. However, the new influx of refugees has meant that farmers no longer have access to sufficient land to feed their families. At the same time, WFP food assistance has been phased out for those refugees that has been in the country for several years. There is therefore an urgent need for new produce, which can be produced without much land or need for capital investment, and which can provide both income and nutrition. Similarly, the local population living in the area surrounding the settlement, like the majority of the population in Uganda, are mainly small-scale and subsistence farmers, with limited income opportunities, and facing severe vulnerability to weather-related shocks.

So far, the relationship between refugees and the local population has been generally positive, but the environmental impact of the growing refugee population risks increasing tensions. There is interaction between refugees and the local population, with refugee children attending schools outside the settlement and local children attending schools inside the settlement. In order to ensure that the local population also benefits from humanitarian aid projects, and avoid tensions between locals and refugees, the Government of Uganda requires that at least 30 percent of aid is spent on host communities, and all humanitarian aid projects must include both refugees and host community members.

1. **Partnership**

Impact Designs has since 2018 been working with several partners in Uganda and internationally to prepare the proposed project, which we are now ready to start piloting. The project will contribute to strengthening these partnerships and to creating a network of international and national NGOs, private sector companies and researchers focusing on developing the edible insect sector in Uganda.

**The applicant**

Impact Designs is a non-profit voluntary organisation based in Aarhus Denmark. The organisation was established in 2018 by Rasmus Schjødt and Charlotte Bay Hansen and now has about 130 members and a group of dedicated volunteers in Aarhus. Our focus is the development of sustainable business models with and for refugees in low- and middle income countries. The proposed project will be managed by the three board members, Rasmus Schjødt, Charlotte Bay Hansen and Anna Bonven, with the support of a part time administrative assistant. Impact Design’s Chairman, Rasmus Schjødt, will be the Project Coordinator. Rasmus has ten years experience working professionally in international development, including in the refugee settlements in Uganda. Throughout 2019, he has been working closely with the local partners in Uganda on designing and preparing the project, including three visits to Uganda. He will continue to communicate regularly with the partners, and ensure ongoing monitoring through skype team meetings every two weeks as well as two in-country visits (at the beginning and end of the project). Impact Designs is also responsible for coordinating technical support from international edible insect experts at Heimdal Entofoods and the University of Wisconsin-Madison.

**The partner in Uganda**

Mothers Against Malnutrition and Hunger (MAMAH)is the lead civil society partner in Uganda, with responsibility for coordination between the other involved actors, and for programme and financial reporting to Impact Designs. MAMAH is a Ugandan non-profit, which aims to improve food and nutrition security for the most vulnerable groups in communities as well as fight gender-based poverty. MAMAH has 8 years’ experience running community-based interventions in Western Uganda and currently supports over 967 smallholder farmer families with various interventions in food and nutrition security as well as income generation in Mityana, Wakiso, Gomba and Kampala districts. Dr. Violet Gwokyalya, the founder and CEO of MAMAH, is a nutritionist, and will provide technical quality assurance of the school-based component of the project, focusing on the production of mealworms to improve child nutrition. She will also be responsible for the overall coordination of the project in Uganda. In addition, MAMAH will have a Project Officer working full time on the project for the 6 month period, who will organise trainings under result 1 and 2, carry out continuous monitoring and be responsible for financial documentation and reporting.

**Other actors involved in the intervention**

**In Uganda**

*Bobo Eco Farm* is a demonstration farm located in Mityana, Western Uganda, which develops innovative solutions to support smallholder famers to increase production efficiency and incomes without compromising environmental sustainability. Bobo Eco Farm is a leading proponent of ‘eco-smart’ farming, and a major player in supporting the livelihoods of the surrounding communities. It is registered as a private company. The farm has 12 years’ experience piloting innovative agricultural interventions, including an ongoing pilot production of Black Soldier Fly Larvae (BSFL). With support from Impact Designs, Bobo Eco Farm has in 2019 established a test colony of mealworm, and Edward Ssebbombo, the proprietor of the farm, will be responsible for monitoring and providing technical support to the BSFL and mealworm production in the project. The Farm is located in Mityana, on the main road from Kampala to Kyaka II settlement and about two hour’s drive from the settlement.

*Yiya Solutions* is a Ugandan non-profit based in Kampala. The organisation provides schools with curriculum development, teacher training and classroom teaching on engineering modules aligned to math and science topics, using construction of practical devices to teach science. Yiya Solutions will bring its experience with school-based interventions, engaging trainings and curriculum designs to the project, and will support the development of an approach to production of mealworm in schools in and around the settlement.

*The Danish Refugee Council (DRC)* has been operating in Kyaka II settlement since January 2013. DRC is the largest implementing partner in the settlement and is responsible for implementing livelihoods activities in the settlement on behalf of UNHCR. DRC has a livelihoods team based in the settlement, as well as a network of refugee extension workers supporting their livelihoods activities. They are supporting Farmers’ Associations in and around the settlement with livelihoods activities. DRC will provide transport to and from the settlement for project staff, and DRC staff and refugee extension workers will assist in identifying and mobilising participants for trainings. The project will include initial trainings of DRC livelihoods staff and extension workers to enable them to assist with ongoing monitoring and support in the settlement.

**International**

*MIGHTi:* MIGHTi (the Mission to Improve Global Health Through Insects) is a collaborative research project focusing on edible insect farming. The founder of MIGHTi, Dr. Valerie Stull at the University of Wisconsin-Madison, has contributed technical advice in the planning phase of the project, based on her experience with insect farming (including mealworm) in Sub-Saharan Africa. She will continue providing technical advice in particular with mealworm rearing, and will also explore options for establishing a research project around the intervention.

*Heimdal Entofarm:* Heimdal Entofarm is a mealworm farm in Denmark. The farm has donated mealworm eggs and larvae to start production in Uganda, and will provide technical advice on mealworm production, based on their experience.

1. **The actual intervention**

The overall objective of the project is to: *“Strengthen the ability of schools and farmers’ associations in and around the Kyaka II refugee settlement to increase production of nutritious food and generate income.”* This will be achieved through three components: 1) piloting production of Black Soldier Fly Larvae for income generation; 2) strengthening capacity of farmers’ associations; 3) piloting production of mealworm in schools to improve child nutrition. The proposed project is a pilot expected to test new types of intervention over a period of six months, between January and July 2020. The main expected outcome is that ‘proofs of concept’ has been established for the production of black soldier fly larvae and mealworm for income generation and nutrition in and around refugee settlements in Uganda, and that local farmers associations has gained interested in and capacity to expand production (with the necessary technical and financial support).

***Result 1: Piloting production of Black Soldier Fly Larvae (BSFL) in and around the Kyaka II settlement.*** Based on the experience of Bobo Eco Farm with the production of BSFL, the project will support farmers’ associations in and around Kyaka II settlement to pilot production of BSFL. Refugee and host community farmers will receive BSFL hatchlings from Bobo Eco Farm, plastic containers for rearing BSFL and training in how to do so. 50 farmers, representing 10 farmers’ associations, will be trained, of which at least 50% will be women. In order to ensure that host communities are benefitting from the project, in line with GoU policies, at least 30% of participants will be from host communities. Initially, farmers will sell their produce back to Bobo Eco Farm, which then processes it into animal feed, which is sold to local fish and poultry farmers. However, in the future, farmers associations or cooperatives may be sufficiently strengthened to take over responsibilities for both inputs (eggs and hatchlings) and processing. Bobo Eco Farm will be the technical lead for these activities, with MAMAH providing coordination and monitoring, and DRC providing logistical support.

***Activities***

* + 1. Market research: A local consultant will be contracted for 10 days to carry out research on markets for animal feed in Uganda and competitiveness of BSFL-based feed (with a focus on poultry and fish farming). The output will be a report that can form the basis for development of a business model for commercial BSFL to provide income for small-scale farmers in Uganda.
    2. Establish additional breeding unit at Bobo Eco Farm. In order to ensure a steady supply of BSFL hatchlings to the farmers being trained, the project will establish one additional breeding unit and nursery at the farm.
    3. Initial sensitisation workshop. In cooperation with DRC, staff from MAMAH and Bobo Eco Farm will visit Kyaka II settlement to carry out a workshop to introduce the project to local leaders and farmer association leaders. This visit will also be used to identify appropriate locally available feedstock for the BSFL and any logistical issues that needs attention before starting trainings. This will be a 1-day workshop for about 30 participants.
    4. Training of DRC staff and extension workers. Staff from Bobo Eco Farm will provide a 2-day training for about 10 DRC staff and extension workers on BSFL production to enable them to assist with monitoring and support to trained farmers in the future.
    5. Community meetings to sensitize and select farmers for training in BSFL production. In cooperation with DRC staff and community leaders, staff from Bobo Eco Farm will hold meetings with farmers to identify 10 farmers associations from which farmers will be trained in BSFL. Farmers will be selected based on experience and interest in the project. This will be a 1-day meeting.
    6. Introductory visit for lead BSFL farmers to Bobo Eco Farm. The farmers will spend a day at Bobo Eco Farm to gain familiarity with the BSFL production process and with handling the larvae.
    7. Visibility initiatives. The project will design and distribute brochures with project information and design and provide T-shirts to farmer leaders to ensure visibility and project promotion.
    8. Pilot training to get feedback on the training approaches, manuals etc. Bobo Eco Farm staff will carry out a 2-day test of the training with a small group of about 10 farmers, to receive feedback and make any necessary adjustments to the training approach and training materials.
    9. Training of farmers in BSFL production. Bobo Eco Farm staff will train about 50 lead farmers from 10 farmers associations in BSFL production, including at least 15 host community farmers and at least 25 women. The training will take place in the settlement over 4 days, with 25 farmers in two group trained during the first 2 days and another 25 trained during the last 2 days, so each training lasts 2 days. Since breeding will be done at Bobo Eco Farm, the training will focus on larvae rearing (fattening).
    10. Providing trained farmers with production equipment. As a part of the training, farmers will be provided with their own BSFL rearing kits.
    11. Routine follow-up visits to trained farmers. Staff from Bobo Eco Farm will visit the settlement twice each month to follow up on the trainings (12 visits during the project).
    12. Exchange of experience visit for lead BSFL farmers Bobo Eco Farm. The trained farmers will spend a day at Bobo Eco Farm to exchange experiences and gain inspiration and encouragement. The day will also be used for vision casting for future expanded production.
    13. Review meetings with stakeholders. Two review meetings will be held, one after 3 months and one towards the end of the project, to review progress, strategies and set new goals. Participants will include staff from MAMAH, Bobo Eco Farm and DRC. Impact Designs’ Project Coordinator will participate in the final review meeting. The final review meeting will also be used to develop proof of concept for a model for efficient delivery of eggs or hatchlings to farmers, collection of larvae from farmers and processing of larvae into protein for animal feed. This will build on the market research carried out earlier, to ensure that production is targeted at the most important markets, and include plans for scaling up the intervention.

***Result 2: Strengthening capacity of farmers’ associations***

DRC has been supporting farmers’ associations in Kyaka II settlement for several years. A total of 50 groups with 625 members have been supported so far. These vary in size from 15 to more than 100 members. Some have official registrations, while others do not. Members of the associations often farm various crops and vegetables on common land, while they also have their own individual small plots. Some of the farmers’ associations started as Savings and Loans Associations, and in some cases the profits from the sale of the common produce are used to provide cheap loans to members. DRC provides seeds and advice through extension workers for the farmers’ associations they work with. In addition, DRC has supported a Farmer’s SACCO in the settlement. The project will strengthen the capacity of at least 10 farmers’ associations to be able to support the production of mealworm and BSFL. In the initial phase, the associations will focus on production, but as their capacity grows, they may be able to take over responsibilities for inputs (production of insect eggs) and outputs (processing into products for animal feed and human consumption). Stronger farmers’ associations will also be better able to represent the interests of smallholder farmers in decision-making processes in and around the settlement, and can contribute to building networks and cooperation between refugee and host community farmers. Capacity development activities will be tailored to the needs of each organisation. These activities will be led by MAMAH, building on their experience working with farmers’ associations, with logistical and technical support from DRC, based on their existing relationships with the associations in Kyaka II.

***Activities***

* + 1. Support formalisation and registration of farmers’ associations. MAMAH staff will carry out at least three visits to the settlement during the project to establish relations with representatives of the farmers associations involved in the BSFL production, and support them to strengthen their organisations, including by helping them establish by-laws and register officially with local authorities. The project will also provide financial support to cover registration fees.
    2. Train members of farmers’ associations on market literacy, group dynamics and governance. MAMAH staff will carry out trainings for the 10 supported farmers associations on topics such as market literacy, group dynamics and governance. The specific topics will be decided based on the needs of the associations. This will be three 1-day trainings for a group of approximately 20 participants (2 from each association).

***Result 3: Piloting production of mealworm in schools***

Mealworms provide an excellent source of protein and essential vitamins and minerals. They can be easily produced in schools, similarly to vegetable production in school gardens. The project will develop culturally appropriate and context-specific teaching modules, which will cover topics including the mealworm lifecycle (from eggs, through larvae, pupae and beetles), to teach biology, and the construction of production kits for science classes, following the approach developed by Yiya Solutions in Uganda. Previously, we conducted mealworm larvae tests among refugees and host community members, which demonstrated that community members enjoy the flavour of the larvae. Mealworms can be fried and eaten whole, making them a popular snack among children; they can also be ground into flour and added as fortification to school meals. The approach will initially be piloted in two schools – one inside and one outside the settlement. Schools will be selected by MAMAH and Yiya Solutions staff in cooperation with OPM/UNHCR and implementing partners, based on interest among school management and teachers. These activities will be led by MAMAH, with technical support from Yiya Solutions for curriculum development and trainings. In addition, the project will benefit from technical support from MIGHTi and Heimdal Entofarm.

***Activities***

* + 1. Establish professional mealworm production at Bobo Eco Farm. With the support of the Danish commercial mealworm producer Heimdal Entofarm, the project will establish an effective and sustainable mealworm production at Bobo Eco Farm. This will ensure a healthy colony, which can supply future activities with mealworm and seed other colonies. It will also enable research into for example various types of feed stock. Staff from Heimdal Entofarm will spend a week at Bobo Eco Farm to work with staff from the farm to improve the mealworm production facilities.
    2. Curriculum development. MAMAH and Yiya Solutions staff, with technical input from Dr. Valerie Stull, will develop a curriculum for utilising mealworm production to teach topics of biology, nutrition and science.
    3. Project introduction workshops to sensitize school leaders (Head Teachers; School Management Committee head; PTA head). MAMAH and Yiya Solutions staff will visit schools to introduce the project mission and clarify roles and expectations.
    4. In-school sensitizations. The following visits by MAMAH and Yiya Solutions staff to the schools will include a broader group of both teachers and students, and will serve to select project patrons from staff, student project leaders and agree on next steps.
    5. Plan training. MAMAH and Yiya Solutions staff will together plan the training of students and teachers.
    6. Pilot training of teachers and students. MAMAH and Yiya Solutions staff will carry out a 1-day pilot of the training approach and materials, to receive feedback and make any necessary adjustments.
    7. Training of leaders and students. MAMAH and Yiya Solutions staff will train about 30 teachers and students in each of the two schools in mealworm production. Trainings will include taste tests, training on insect processing and cooking. The initial training will take place over 2-days. The training will be facilitated by 2 trainers from MAMAH and 2 trainers from Yiya Solutions. Trainings will be supported by Dr. Valerie Stull from MIGHTi to ensure the quality of the trainings, since mealworm production is a new concept in Uganda.
    8. Construction of mealworm production kits in two schools. Small, simple, shelters will be constructed at the two schools to protect the mealworm production kits from weather and animals. The construction of the mealworm production kits will be integrated into the trainings, following Yiya Solutions’s approach.
    9. Visibility initiatives. The project will design and distribute T-shirts to students and teachers to ensure visibility and project promotion.
    10. Routine follow-up of the trained students. MAMAH and Yiya Solutions staff will carry out follow-up visits to the schools twice a month. These visits will also serve as an opportunity for collecting data on indicators for monitoring and evaluation, including data on mealworm yields at the schools and uses for mealworms/consumption trends.
    11. Inter-school quarterly review meetings. MAMAH will facilitate review meetings twice during the project, after three months and towards the end of the project, with key stakeholders, including school management, OPM/UNHCR representatives. The meetings will serve to review progress, strategies, and set new goals.

**Target groups**

*50 farmers, out of which at least 25 will be women.* The majority will be Congolese refugees, but in line with GoU policies the project will also include at least 30% host community members. The farmers will represent approximately 10 farmers’ associations. They will be selected based on criteria including: interest and capacity to successfully implement the project and their need for support. DRC staff in the settlement will facilitate the selection process, through their established relationships with the farmers associations.

*6-10 school leaders and 60 students in 2 schools*, one inside the settlement and one outside. Schools will be selected in cooperation with OPM/UNHCR staff in the settlement, based on interest from school management and teachers, also taking into consideration whether they have the necessary time and resources. Students will be selected based on interest together with teachers and management.

*About 5 DRC staff (Ugandans) and 5-10 DRC community extension workers (Congolese refugees).* These will be staff and volunteers from the DRC livelihoods team in Kyaka II.

**Innovative and experimental approaches and plans for systematisation of experiences**

The project will pilot the production of edible insects among refugees, as a highly innovative approach to developing new livelihoods options. The expected outcome of the project is that a proof of concept will be developed for mealworm and BSFL production among refugees in Uganda. This is expected to enable scaling up through a combination of grants from donors and private investment on a commercial basis. Impact Designs will draft a report at the end of the project period to set out experiences and provide recommendations for scaling up the intervention. MAMAH will be responsible for ongoing data collection and final evaluation, using the below indicators. The project includes a rapid assessment to provide baseline data at the beginning of the project and an endline assessment to gather data for evaluation. Data collected will include for example perceptions and attitudes towards eating insects among teachers and students, and capacity of farmers associations to support their members.

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| **Output indicators** | **Outcome indicators** |
| **Result 1**  - Report on the market for BSFL production for animal feed in Uganda.  - 50 farmers trained on BSFL production. | By July 2020 at least 50 farmers, including at least 15 host community members and 25 women, are generating income from production of BSFL and a market for BSFL-based produce has been established. Proof of concept for BSFL production has been established. |
| **Result 2** | By July 2020, 10 Farmers Associations are actively supporting their members to generate income, including through support to expansion of BSFL production. |
| - 10 Farmers Associations supported to formally register their associations. |
| - Representatives from 10 Farmers Associations trained. |
| **Result 3** | By July 2020, 2 schools have established healthy mealworm colonies, producing mealworm, which are consumed by children on a regular basis. Mealworm production has been integrated into curriculums and is used in teaching. |
| - 6-10 school leaders and 60 students in 2 schools trained on mealworm production. |

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|  | Description | Timetable | Responsible |
| **Overall objective** | **Strengthen the ability of schools and farmers’ associations in and around the Kyaka II refugee settlement to increase production of nutritious food and generate income.** |  |  |
| **Specific objective** | **Pilot production of BSFL for income generation among farmers’ associations and mealworm for nutrition among schools in and around Kyaka II settlement.** |  |  |
| **Result 1** | **By July 2020 at least 50 farmers, including at least 15 host community members and 25 women, are generating income from production of BSFL.** |  |  |
| Activity 1.1.1 | Market research, local consultant | Feb | Impact Designs+Bobo |
| Activity 1.1.2 | Establish additional breeding unit at Bobo Eco Farm | Jan | Bobo Eco Farm |
| Activity 1.1.3 | Sensitisation workshop for community leaders | Jan | Bobo Eco Farm |
| Activity 1.1.4 | Training of DRC staff and extension workers on BSFL production | Jan | Bobo Eco Farm |
| Activity 1.1.5 | Community meetings to sensitize and select farmers for training in BSFL production. | Jan | Bobo Eco Farm |
| Activity 1.1.6 | Introductory visit for lead BSFL farmers (1 day) to Bobo Eco Farm | Jan | Bobo Eco Farm |
| Activity 1.1.7 | Visibility activities | Feb | Bobo Eco Farm |
| Activity 1.1.8 | Pilot training approach and materials |  |  |
| Activity 1.1.9 | Training of 50 lead farmers from 10 farmers associations in BSFL production | Feb/Mar | Bobo Eco Farm |
| Activity 1.1.10 | Providing trained farmers with production equipment. | Feb/Mar | Bobo Eco Farm |
| Activity 1.1.11 | Routine follow-up of trained farmers (twice a month) | Mar-July | Bobo Eco Farm |
| Activity 1.1.12 | Exchange of experience visit for lead BSFL farmers (1 day) to Bobo Eco Farm | June | Bobo Eco Farm |
| Activity 1.1.13 | Review meetings with stakeholders: review progress, strategies and set new goals. | Mar+July | Bobo Eco Farm |
| **Result 2** | **By July 2020, at least 10 farmers’ associations have been strengthened** |  |  |
| Activity 1.2.1 | Support formalisation and registration | Mar-July | MAMAH+DRC |
| Activity 1.2.2 | Trainings on group dynamics, governance | Mar-July | MAMAH+DRC |
| **Result 3** | **By July 2020 at least two schools have been supported to produce mealworm.** |  |  |
| Activity 1.3.1 | Establish professional mealworm production at Bobo Eco Farm | Jan | MAMAH+Yiya Solutions |
| Activity 1.3.2 | Curriculum development | Jan | MAMAH+Yiya Solutions |
| Activity 1.3.3 | Project introduction workshops in two schools | Jan | MAMAH+Yiya Solutions |
| Activity 1.3.4 | In-school sensitizations meetings | Jan | MAMAH+Yiya Solutions |
| Activity 1.3.5 | Plan training | Jan | MAMAH+Yiya Solutions |
| Activity 1.3.6 | Pilot training approach and materials | Feb | MAMAH+Yiya Solutions |
| Activity 1.3.7 | Training of leaders and students in mealworm production & provide starter kits | Feb | MAMAH+Yiya Solutions |
| Activity 1.3.8 | Construction of mealworm production kits | Feb | MAMAH+Yiya Solutions |
| Activity 1.3.9 | Design & distribution of T-shirts & caps to student leaders & patrons: visibility, project promotion | Feb | MAMAH |
| Activity 1.3.10 | Routine follow-up of the trained students (twice a month) | Feb-July | MAMAH |
| Activity 1.3.11 | Inter-school quarterly review meetings with stakeholders | Mar+July | MAMAH |

**Staffing**

The intervention will, to a large extent, be implemented through voluntary contributions. Impact Designs’ Project Coordinator will be volunteering his time to the coordination of the project, with support from a paid part-time administrative assistant in Denmark (5 hours per week). In Uganda, the Directors of MAMAH and Bobo Eco Farm will also contribute a significant part of their time to the project on a voluntary basis, including leading the planned trainings. The MAMAH Director will be supported by a paid full time Project Officer, to ensure the necessary support for planning, coordination and financial management. Dr. Valerie Stull has also agreed to volunteer her time, and DRC will contribute the time of their staff and extension workers in the settlement to support the project logistically and will also make their vehicles and drivers available (the project will pay for fuel). Paid technical support from a Bobo Eco Farm Project Officer, from Yiya Solutions staff and from Heimdal Entofarm has been budgeted under the relevant activities.

1. **Intervention-related information work in Denmark**

Impact Designs will disseminate information about the project in order to increase awareness about the refugee situation in Uganda and the potential for production of edible insects, and build a support base in Denmark for the work. The information work will target two groups: a) students who are interested in international development and may become members and volunteers of Impact Designs, b) private companies and wealthy individuals who may be interested in supporting the work financially. Information work will include:

* Development of a short video (10-15 minutes) from the Kyaka II settlement, showing life in the settlement, and how refugee farmers and entrepreneurs are working to improve their situation. Filming will be done by the Impact Designs Project Coordinator during the first monitoring visit, with subsequent editing by a professional video editor in Denmark. We will also explore the possibility of applying for separate funding from CISU for bringing a professional videographer to Uganda to film.
* Production of a roll-up for use at events.
* Designing and printing flyers and business cards.
* Awareness raising event at ‘Folkemødet’ 2020 (through CISU).
* Messages disseminated on social media (Facebook and Instagram).
* Organisation of at least two talks at cafés in Aarhus about the project.

1. **Supplementary financing**

One Life Foundation has confirmed that they will contribute DKK 118,000 to the project, based on the budget submitted with this proposal. One Life Foundation will fund activities under Result 3, while CISU will fund all activities under Result 1 and 2.

1. https://www.impactdesigns.dk/wp-content/uploads/2019/01/Kyaka-II-Potential-for-Edible-Insects-Production.pdf [↑](#footnote-ref-1)
2. Onsongo et al. (2018). Insects for Income Generation Through Animal Feed: Effect of Dietary Replacement of Soybean and Fish Meal With Black Soldier Fly Meal on Broiler Growth and Economic Performance. Journal of Economic Entomology, 2018, 1-8. [↑](#footnote-ref-2)
3. https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/56858/IDL-56858.pdf [↑](#footnote-ref-3)