PROJECT END NARATIVE REPORT

BLACK SOLDIER FLY LARVAE PROJECT (BSFL)

IMPLEMENTED BY THE AFRICAN CENTRE FOR AGROECOLOGY AND LIVELIHOOD SYSTEMS, UGANDA MARTYRS UNIVERSITY

SUBMITTED TO PSFU/SDF

OCTOBER 2021

Uganda Martyrs University

making a difference

Office of the Vice Chancellor
Email: vcumu@umu.ac.ug

15th October 2021

The Executive Director
Private Sector Foundation of Uganda (PSFU),
P. O. Box 7683, Kampala

Dear Sir,

Re: Submission of the Final Reports for the Black Soldier Fly Larvae (BSFL) Project

On behalf of the University, I wish to extend our sincere appreciation to PSFU for having generously supported this project with **UGX 939,292,000** and for the flexibility and understanding whenever we faced challenges. We commit to scale up the BSFL innovation to make a difference in the lives of many people in Uganda and beyond. Kindly receive the final reports for the project. These include:

1) Project Narrative report from inception to the last day of the of the official launch of the BSFL innovation. This report also contains the Financial report of the project.
2) A Monitoring and Evaluation report covering the entire period, including:
    a. A 118 pagewritten report
    b. A video report with live experiences from farmers in various districts of Uganda
    c. A one page evaluation poster
    d. A one page fact sheet about the entire project
3) A copy of the BSFL curriculum developed for training the farmers: The curriculum is for both the ordinary farmers and the extension workers/ technical people in the districts and communities.
4) Copies of the training manuals for the two categories of trainees, namely:
    a. For the extension workers
    b. A training cartoon book for the ordinary farmers, especially those who may not be able to read and write
5) A project completion certificate, summarizing the project

We are proud to be associated with PSFU/SDF and look forward to more partnership opportunities as we strive to make a difference in our country and the region.

Sincerely yours,

Rev. Dr. Christopher B. Mukidi
Ag Vice Chancellor

OFFICE OF THE VICE-CHANCELLOR
P. O. BOX 5498
KAMPALA UGANDA

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1. PROJECT SUMMARY

The Private Sector Foundation Uganda (PSFU) through the Skills Development Facility (SDF) with funding from the Government of Uganda and World Bank extended a grant to Uganda Martyrs University through the African Centre for Agroecology and Livelihood Systems (ACALISE) to establish the black soldier fly larvae project as an agricultural innovation. The main components of this project included; 1) to train groups of farmers in the breeding and rearing of the larvae of the black soldier fly, 2) to carry out a ToT for UMU staff in black soldier fly larvae breeding 3) establish and furnish the training centre and related offices with a) mini-entomology laboratory equipment to harness research, b) a waste collection facility c) a furnished conference hall d) a BSFL breeding unit; 4) develop a short course University curriculum to scale up training to many people in the country, and formally launch the innovation before closure of the project.

The project justification was the poor availability and high cost of livestock feeds leading to high production costs and hence low profitability to the farmers. The BSFL was seen as an affordable and environmentally friendly alternative source of livestock feeds. Therefore, ACALISE introduced an innovative training course to equip students and farmers with skills to turn their farms/domestic organic waste streams into alternative low-cost and sustainable animal feeds using the larvae of the black soldier fly.

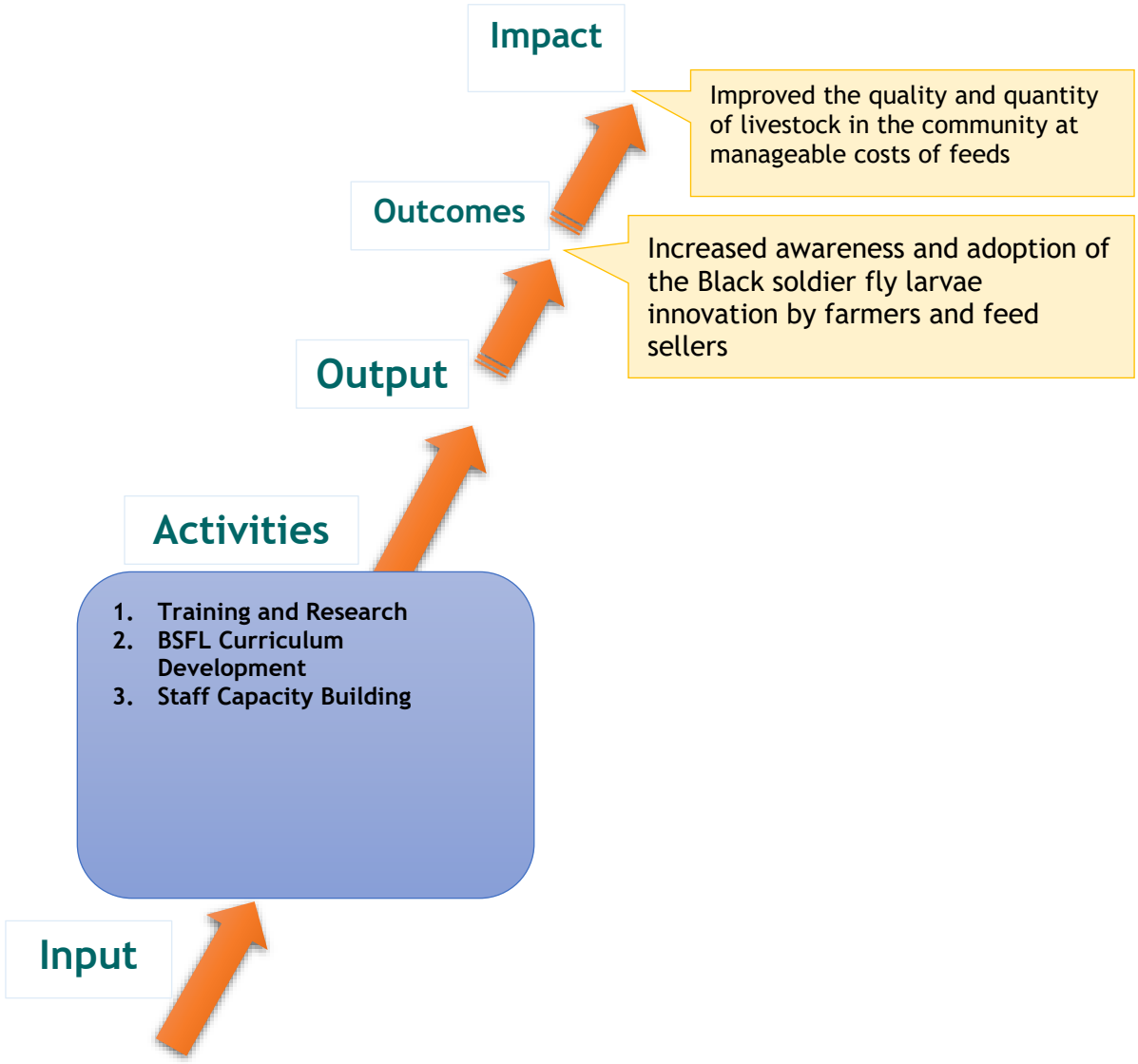
2. AIMS AND OBJECTIVES

The main objective is to commercially breed the Black Soldier Fly (BSF) Larvae as an alternative high quality protein to conventional expensive fish and soya protein for livestock feeds. The key of the project includes;

1. Establish a BSF breeding unit at the University Faculty of Agriculture.
2. Train at least 30 trainees from the Faculty of Agriculture
3. Train at least 10 farmer groups on breeding the larvae
4. Develop a training curriculum (short course) in insect breeding and rearing.
5. Establish a mini feed mill at the University

3. BLACK SOLDIER FLY LARVAE IMPACT

3.1 The BSFL Impact Chain



Source: ACALISE (2021)

3.2 Evidence of the Impact Chain

PROGRAM CHAIN OF EVENTS	MATCHING LEVELS OF EVIDENCE
7. Impact	Improved the quality and quantity of livestock in the community at manageable costs of feeds
6. Outcomes	Increased awareness and adoption of the Black soldier fly larvae innovation by farmers and feed sellers
5. Outputs	Developed a curriculum for black soldier fly larvae training. Developed a farmers and extension workers training manual. Trained 30 staff and students of Uganda Martyrs University. Trained 60 members of farmer groups Launched a mini entomology laboratory Launched the feed and food mills Launched the BSFL training facilities Renovated and furnished training facilities
4. Reactions	Farmers feel that it's a timely cost-effective feed alternative. Farmers need the Uganda Martyrs University and its partners like ACSA, NARO feel that the training should be scaled out to other parts of the country. Livestock feeds dealers suggest that government supports them financially to do large scale production.
3. Participation	Livestock farmers Livestock feed dealers ACALISE and partners; BOBO Eco Farm, ACSA, SDF/PSFU Faculty of Agriculture staff and Students
2. Activities	Training and Research BSFL Curriculum Development Staff Capacity Building Entomology Laboratory BSFL Demonstration facilities for: Breeding, Rearing, Feed processing
1. Inputs	- Support from SDF/PSFU - Support from Uganda Martyrs University Management

Source: ACALISE (2021)

4. THE BLACK SOLDIER FLY LARVAE ACTIVITIES

4.1 Mini Entomology Laboratory

The mini entomology laboratory was setup and will be very key in research and experiments of the black soldier fly larvae,and will also be used for other studies. This laboratory will among other studies focus on the physiology of insect/plant interactions and the ecology of parasite/host and predator/prey interactions. The Entomology Laboratory will focus on insect biodiversity and works in association with various research projects on insects of several crops including cassava, plantains, fruits and vegetables.

Utilization of the Entomology Laboratory (Testimony from Student)

Student name: Abdoulaye Fofana Fall.

Country of origin: Senegal

Programme: Ph.D. in Agroecology and Food system

Sponsor: ACALISE - Uganda Martyrs University

Research area:

Topic:

Effect of Arbuscular Mycorrhizal Fungi (AMF) and NPK fertilizer on soil fertility and maize yield.

The Research is: Transdisciplinary, including microbiology, entomology, Biology molecular, agronomy, soil sciences and chemistry. Both lab and field research are sited in Nkozi (UMU). The lab is multifunctional, meaning we can do many types of research from this lab (entomology, microbiology etc.) and all the basic equipment are available.

The aim is to create a bank of inoculum (AMF) (bio fertilizer), to produce an organic insecticide and to make a collection of insect (Fall army worm, termites, bees…) for future research.

Methodology:

Microbiology

Extraction of the spores of AMF using wet sieving method (Gederman and Nicholson, 1963). The spores are then characterized morphologically. After that we produce inoculum (Bio-fertilizer).

Biomolecular

Molecular characterization is done using DNA extraction PCR, electrophoresis methods.

After Identification of different species of AMF, they will be multiplying to make inoculum (Bio-fertilizer).

Entomology
Pest control: Fall armyworm is the most difficult insect pests to control in field maize. It causes serious leaf feeding damage as well as direct injury to the ear.

We tried to control this insect at different stage of it live cycle using plant extract.

Plant used: Mexican merry-gold, Neem, Citronella and Jatropha

Insect material used: egg, larvae, pupa and moths.

The material is extracted from an infested maize field and store in the incubator from the Lab.

The plant extract is tested at different stage of the live cycle of the insect

Material used in entomology
This lab is equipped with many machines and each of them has multipurpose depending on what we are working.

- **laminar flow cabinet,** this is used in entomology, microbiology and in biology molecular. It helps to work in a clean and sterilizer environment because the cabinet is equipped with a UV bulb which kills all kind of microorganism
- **Incubator,** it is used to incubate the eggs of the insects
- **Mortar and pestle,** to crush the plant leaves
- **Autoclave,** it is used to sterilized materials such as glass tube, Becher, Petri dish… It is also used to sterilized media and samples.

- **Distilled water machine,** this machine makes distilled water that we used in some reaction
- **Microscope,** it is used to magnify up to 400x non visible things

Weighing scale
Bain-marie, it is used when we want to do some test which need high temperature. For example, when we want to bleach roots, we put them in tube with KOH then we place them in the bain-marie at 90 °C.

Achievements
- We are able to control the spray of fall armyworm at larvae stage (we need to make test in different area to confirm our results).

- Different species of AMF has been identified

- production of Bio fertilizer (inoculum)

Figure 1: PhD student explaining the relevance of the BSFL Mini laboratory equipment

Figure 2: PhD student explaining the relevance of the BSFL Mini laboratory equipment

4.2 The Feed & Food Mills

Overview

Both a feed and food mills were procured, delivered and installed at the faculty of agriculture at Uganda Martyrs University. The mills will be use is research related but not limited the black soldier fly larvae. Research is already underway to determine the feed ratios while using the black soldier fly larvae as an alternative source of protein for livestock. The mills would also be key in ensuring sustainability of the innovation activities. It will also enable the commercial production of feed.

Purpose and use of the feed mill

The feed mill has been built to facilitate the processing of livestock feeds. In this feed mill quality control systems will be adhered to. In addition, the quality of feed will be very much influenced by the mixture of the BSFL and maize bran. Quality control systems will start by defining quality based on physical, chemical, and biological and developing standard specifications for the BSFL and maize bran. Quality control will use proper sampling systems and equipment that will be supported by a laboratory. The mill will produce enable research on the animal feed composition table. It will also produce quality feed for sale as part of the commercialization efforts of the university.

Figure 3: Delivery of the mill at the University

4.3 Training of 10 farmer groups in captive breeding/rearing of BSFL

Training Objectives

The goal of the training was to equip farmers with the necessary knowledge and skills to enable them set up & run their own BSF larvae rearing projects as income generating projects.

The trainers stated that by the end of the training, participants would be able to:

1. Identify the nutritional, economic & environmental benefits of BSF larvae rearing
2. Create small-medium scale larvae rearing farms (farm set-up & maintenance, proper larvae feeding & harvest, & post-harvest handling)
3. Apply controls for challenges that arise during BSFL rearing

Training Methods

The following training methods were used:

- Presentations
- Demonstrations
- Brainstorming sessions
- Experience sharing
- Breakout sessions
- Question and answer sessions
- Excursion to the BSFL breeding / rearing demo at UMU

The mode of training in the workshop was very interactive. The training was very engaging in order to make the participants to learn, grow and develop skills that are needed in breeding the Black Soldier Fly Larvae. So, the trainers used a range of learning strategies, and the purpose of this was to enable the participants develop interest and resilience to build the skills, knowledge required in breeding the Black Soldier Fly Larvae.

The interactive form of training makes learning more interesting and livelier for mature learners. It allows for a two-way exchange of skills and knowledge between the trainers and the participants.

Training Materials and learning aids used

The materials used in the training included:

- BSF larvae – dried & live
- BSF larvae rearing kit
- Sample of feeding substrates
- Sample of BSF larvae rearing bi-products
- BSF larvae harvest kits
- Flip charts & markers
- Masking tapes
- Note books & pens (for participants)
- Canvas / banners with BSFL information
- Sieves
- Buckets
- Hand sanitizers
- Face masks
- Disposable gloves

Samples of the larvae and the pull up banners helped to visualise the learning before visiting UMU Faculty of Agriculture to experience it first-hand.

COVID-19 control measures in place

- Hand washing facilities and sanitizer in place
- Face mask were recommendation for each of the participants
- Social distance was emphasized in sitting and other interactions

These guidelines were recommended by government and thus the need to comply and prevent the spread of Covid – 19.

Areas that were covered under the farmers training

1. The nutritional, economic & environmental benefits of BSF larvae rearing
2. Understanding the BSF larva
3. Optimal Conditions and Requirements for BSF Larvae rearing & growth
4. Feeding the larvae; the feeding substrates & the feed regime
5. Management of waste as a feeding substrate: pre-feeding sorting & processing
6. BSFL harvesting & pre-processing
7. Managing the bio-fertilizer bi-product
8. Managing predators in BSFL production

9. Common pitfalls & trouble shooting

Pre-training assessment

Participants filled diagnostic assessment forms to gauge their entry knowledge on the importance of insects or BSFL in particular. The survey sought answers from participants on; experience with insects as food, previous trainings in insect farming and expectations from the training. The results of the survey indicated that:

Over 90% of the participants reported having some prior experience eating insects especially grasshoppers (nsenene) and white ants (nswa). In addition, 55.7% reported having heard about insect rearing for food & feeds - though only 3% reported having had any prior training in insect rearing. None of the trainees had any prior involvement with BSFL production. This reported prior interaction with edible insects (nswa, nsenene) provided a very good starting point to the introduction of BSFL rearing for animal feeds to the participants. The graph below summarizes trainees experience with insects.

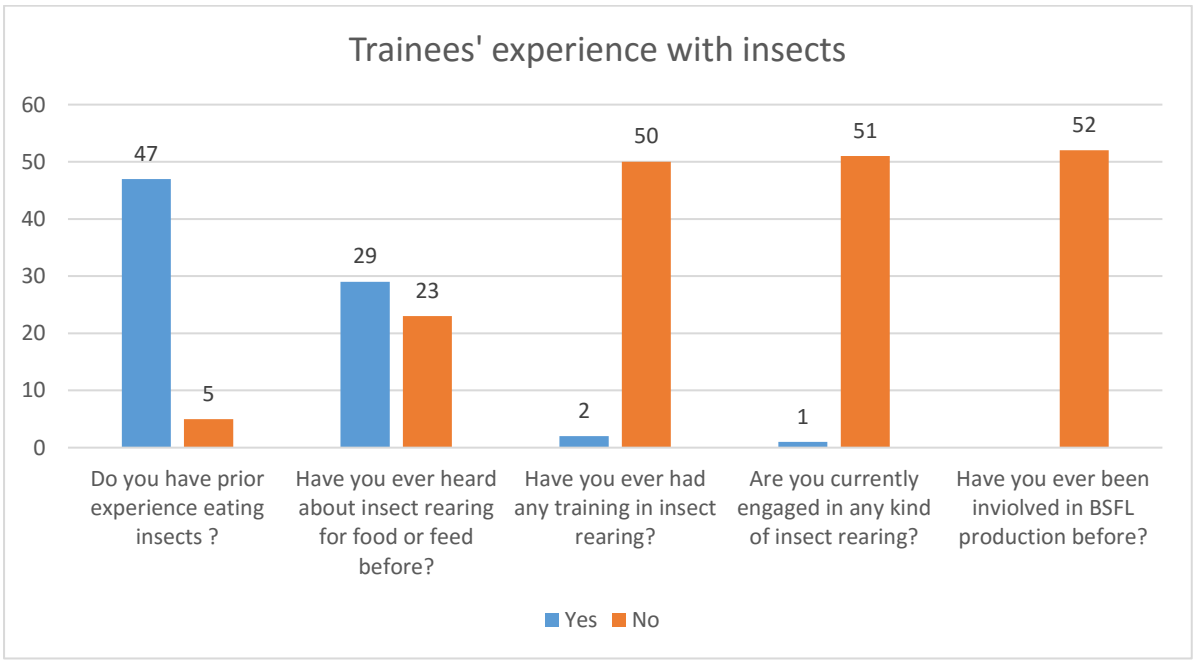


Figure 4: Graph showing Trainees experience with insects

The training started with participants highlighting their expectations and most (over 80%) participants mentioned acquiring knowledge and skills to rear the BSFL to improve the performance of their piggery rearing units and to increase their incomes. There were also other divergent expectations some of which are listed below:

Participants' expectations:

1. To start rearing insects
2. To improve farm productivity, and also get skills to train others
3. To learn BSFL rearing and environmentally friendly practices
4. To learn how to rear BSFL and also conserving the environment
5. To learn how to commercialize BSFL rearing
6. To learn how to make animal feeds
7. To learn about the proper feeding of animals, and how to improve on personal income
8. To gain skills and proper knowledge in piggery rearing
9. To get materials to start BSFL rearing
10. To get the skills to start a business in line with the insects
11. To learn how to reduce on the cost of raising animals
12. To learn how to use waste for profit making
13. To get some good ideas on personal development
14. To learn about the different benefits of insect rearing
15. To learn how to use insect rearing to improve on crop production

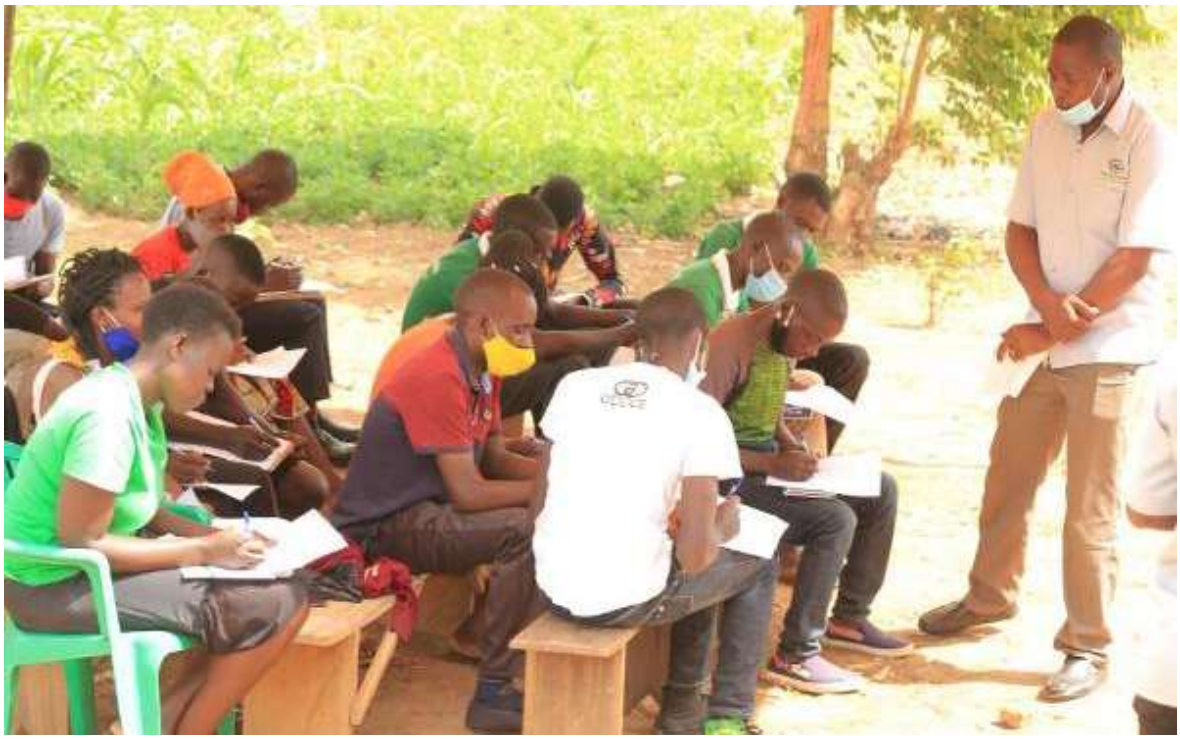


Figure 5: Mr. Ssebombo Edward conducting pre – training assessment of learners

Potential businesses around BSFL

Several potentials businesses were identified around the value chain of BSFL project. These include:

- Produce on large scale to replace expensive additives like silver fish in animal feeds
- Invest in technology to process by products of BSFL
- Bio degradable municipal waste management
- Production of fertilizers from the residues

Technologies for Breeding and Production

- On a small scale, some technologies are being developed and tested by BOBO Eco Farm to suit the local environment of smallholder farmers. These starter kits will be given to the participants after the practical session. They mainly handle caring for the larvae after the eggs hatch.
- Solar technology (this is used at UMU)
- In modern countries, breeding and production uses computerized systems

Figure 6: Training participants inspecting samples of BSF larvae and pupa stage

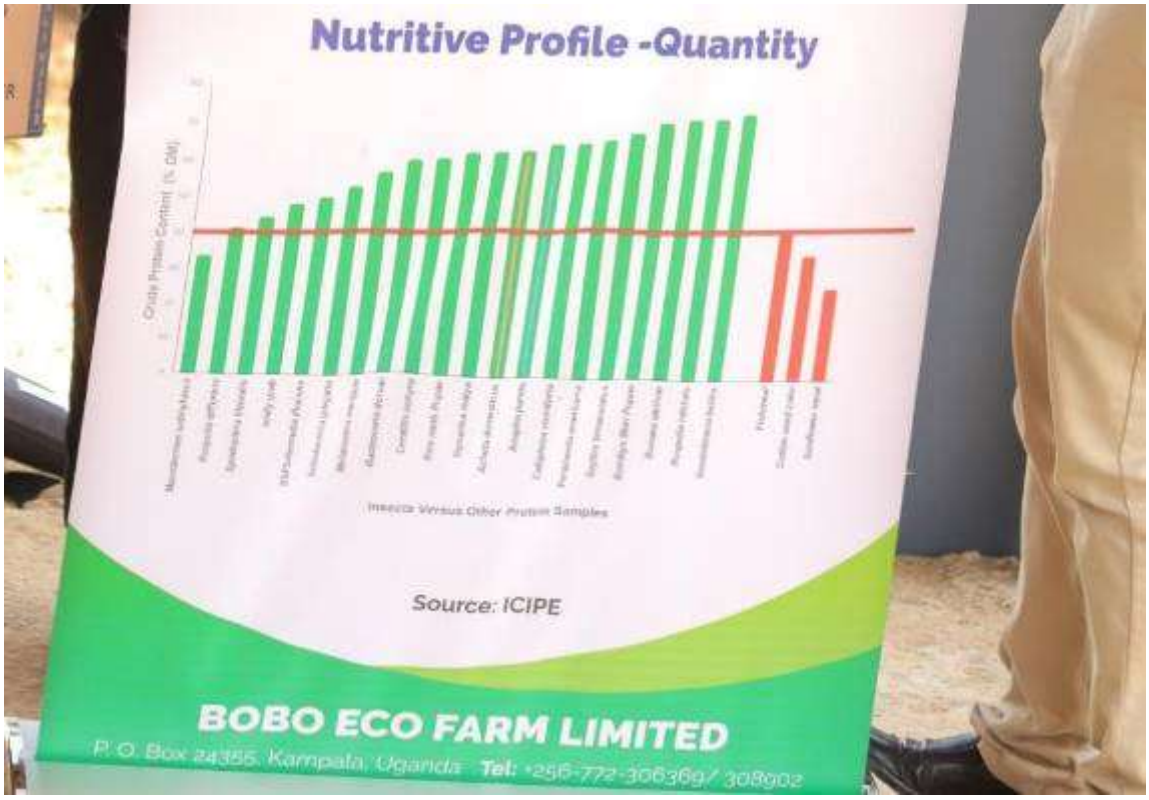


Figure 7: Nutrition values of BSFL

Figure 8: Ms. Irene Kawooya, on feeding of the BSFL

Figure 9: The solar dryer for BSFL at UMU

Figure 10: BSFL training completion certification

Figure 11: BSFL Farmer Trainees receiving Certificates and Rearing kits

Post training survey

During the training, the trainers employed a continuous assessment approach to ensure that participants have mastered the concepts before proceeding to another session. This included question and answer sessions, sharing experiences and other innovative feedback sessions. Nonetheless, participants filled a formal evaluation at the end of the training to be sure that their expectations are met and that feedback on the key elements of the training is obtained. Below is a summary of the post-training assessment.

Participants' feedback:

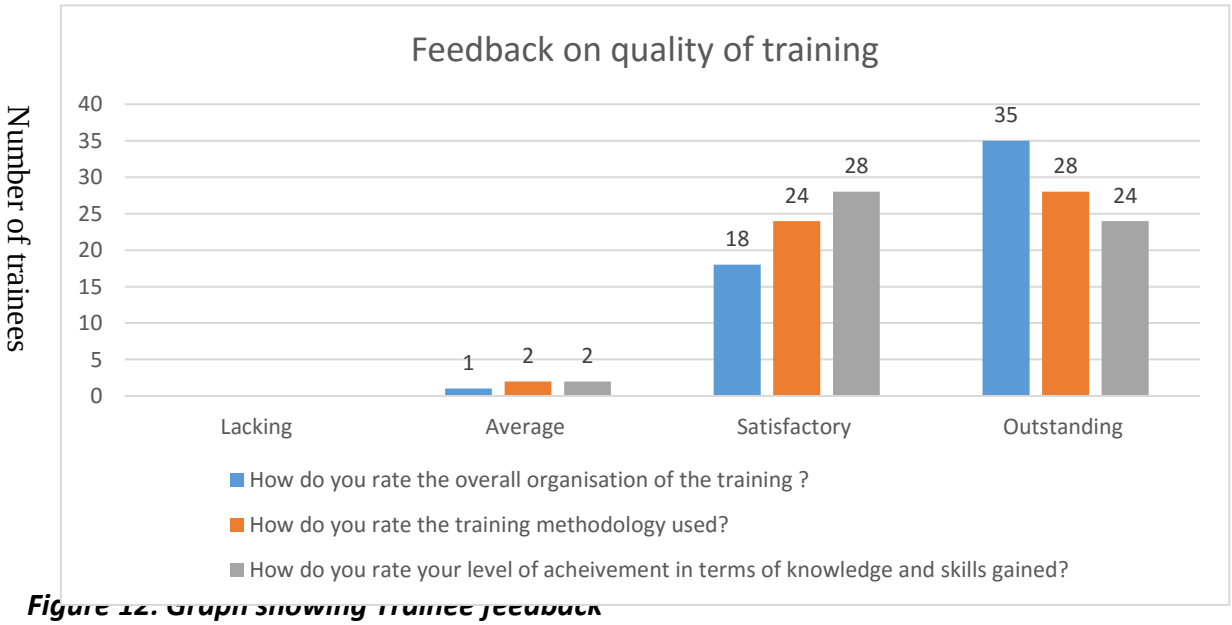


Figure 12: Graph showing Trainee feedback

When asked to rate the overall organization of the training, 65% said it was outstanding and 33% said it was satisfactory. About the training methodologies used, 52% of the participants said they were outstanding while 44% said they were satisfactory. When asked to rank their level of achievement in terms of knowledge and skills gained, 44% said outstanding while 52% said satisfactory. The graph below summarizes their responses:

Regarding whether the trainees felt confident with the level of knowledge and skills gained from the training that they could run their own BSFL rearing units – 100% answered in the affirmative. Similarly, when asked whether they felt confident with the level of knowledge and skills gained from the training that they could recommend BSFL rearing to friends – 100% answered in the affirmative.

Participants were further asked about what they think should have been done better or differently in the training arrangement. The participants had this to say:

- The trainers should have brought more quantities of the live BSF larvae for demonstration during the training.
- A projector would have been a good addition and use of videos.
- Meals could have been better.

When asked which part of the training arrangement the participants liked most, majority echoed the following:

- The practical part with insects
- The fact that they were seeing whatever they were being taught
- Seeing the breeding process of the insects
- The part for feeding insects
- All the parts
- The visit to the university BSFL rearing demo
- The part of harvesting the larvae

Interviews were also conducted and participants were on purposively chosen. The following are excerpts of their responses:

Mr. Ssemanda Jofrey the chairman of the group revealed that he is involved in a number of farming activities ranging from farming to animal rearing. He also informed us that the target is now commercial farming now that substance farming is in place. On the challenges he was facing. He had this to say "*We are having*

problems with limited capital, lack of skills, fake inputs of agriculture and we cannot detect them at the input level. He revealed this can be detected at the outcome level, and this affects our productivity. Now we are lucky UMU has come up and is now helping us to manage our agriculture through such good innovations. We are now in position to make our ingredients from a very rich source of the Black Soldier Larvae. So, with this innovation we may So we now not need to buy silver fish, cotton seed or soya beans anymore. This means that the money that would otherwise have been used to buy silver fish, cotton seeds and soya beans will now be saved for other purposes. We have also known other uses for the Black Soldier Fly Larvae-such as being a source of manure and also a source of income".

When asked how he was going to use knowledge he had gotten from the training. He replied "*I will use it by practicing what I have learnt and adding value on the chain of farming*"

On asking about the importance of the University on taking this intervention to the communities. He replied that it is timely because people have been very green on how they can reduce costs of agriculture inputs. He revealed that now that the university has exposed us to this innovation, we shall definitely reduce on our agriculture costs and increasing outputs at reduced costs.

On whether the university should continue supporting them. He replied that we still need the university so much. The university is the source of knowledge. We continuously need such innovations. "*I also wish to call upon the university to always consider this community when doing their admissions. Our area lacks educated people. In case there are scholarships, we call upon the university to consider us*"

Another participant interviewed Mr. Mulyowa Musa had this to say: "*much as I am a Muslim, I do rear pigs and I do not regret it since I do not eat them*". On the challenges he is facing them, he revealed that diseases are very frequent. Also feeding them was very expensive. Yet they still lacked adequate capital and limited space for rearing pigs. Now that this innovation is in place, am optimistic that our outcomes will improve.

On whether the training has been helpful, he replied as follows: "*the training has been useful. I have personally learnt to make animal feeds from domestic waste*".

On how he was going to use the knowledge from the training, he revealed "*I will continue using the knowledge and skills to enhancing or improving my farming*

activities, especially making the fertilizers for my gardens. But more importantly, I will share the knowledge with my community to promote best practices amongst my friends".

On the role of the university and this intervention, he replied that the university is doing the right thing since farmers are yearning for knowledge and guidance. *"We need the university to organize us so that we can access capital for expansion and continuous training. We also need help on how we can help our animals to avoid getting diseases".*

The participants were enthusiastic and exhibited a lot of interests for the Black Soldier Fly Larvae innovation. This is an indicator that they are interested in the innovation and have some prior successful experience with UMU. For example, one of the participants stated that:

"*It is not the first time UMU is working with us in a bid to transform our communities. You remember in the past our bananas were not flourishing well but UMU came down to us, it taught us how Matooke can flourish despite challenges of climatic change. We are now boasting of having the best Matooke in Mpigi. So even with the Black Soldier Fly Larvae am sure will help us improve our livestock and animal practices. I therefore, call upon my colleagues to accept this innovation".*

4.4 Training of 30 members of the Faculty of agriculture, Uganda Martyrs University in captive breeding/rearing of BSFL

Training Goal:

The major aim of the training was to equip the faculty of Agriculture UMU with the knowledge and skills in the production and utilization of the larvae of the black soldier fly as an alternative livestock feed so as to enable the University to establish a new short training course in BSFL production targeting students and farmers. Hence, the training in effect created a pool of future facilitators/resource people. Along with that, the training also aimed to equip the Faculty of Agriculture - UMU with the knowledge & skills to manage the BSFL breeding/rearing demonstration that has been established at UMU through this project.

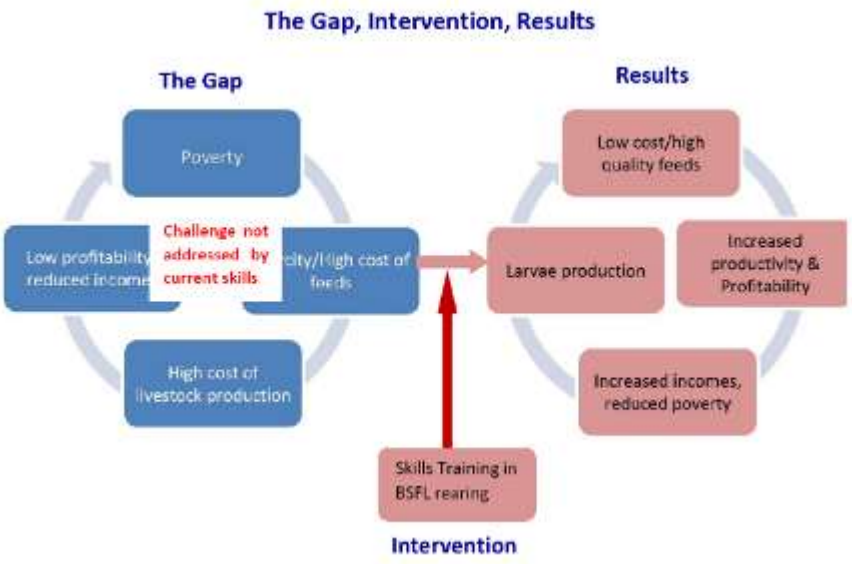


Figure 13: The Gap, Intervention, Results

For the last 20 years, the Faculty of Agriculture, UMU has been producing highly skilled agricultural extension workers as well as running farmer training Programmes offering them hands-on skills needed for improved agricultural production. But feedback indicates farmers are facing the challenges of poor availability and high cost of livestock feeds; driving the production costs high and reducing the profitability of farmers, hence threatening their livelihoods. Therefore, the university is introducing an innovative training course to equip students and farmers with skills to turn their farm/domestic organic waste streams

into alternative low-cost & sustainable animal feeds using the larvae of the black soldier fly.

BSFL rearing has already been successfully piloted at Bobo Eco Farm and has been disseminated the technology to UMU. The next paragraphs, therefore, narrate the details of the training that was conducted between April and August 2019.

Methodology of the training

Trainings involved instructor-led presentations (classroom-style) and out-door/practical activities, ensuring that over 70% of the training is practical hands-on training. Our interactive sessions built upon recognized best training practices across all aspect of human resource capacity development and skills acquisition. The training workshops were organized on the basis of two main trucks; as under: a) Instructor-led (classroom-style) presentations and, b) Field trainings / demonstrations.

The instructor-led presentations (classroom-style) were the principal starting points for deliberations which were carried out in an interactive manner to lay the foundation to a shared understating of the main concepts in BSFL production and the importance of BSFL as a viable alternative feed resource. The presentations and interactive discussions during the instructor-led training workshops were particularly designed to give participants context, trends, and evolution of insect breeding and use as food and feed at the local, national, regional and international levels.

Instructor-led (classroom set-up style) was furthermore utilized because of its ability to deliver a huge amount of information to a big group of people in a short time and the need to deliver the foundational principles of insect breeding and rearing prior to the hands-on training. This enabled the group to eventually successfully launch into the field / practical workshops.

Training Duration and Areas covered:

The training began in the month of April 2019 and was concluded in the third week of the month of August 2019 - covering 65 days.

The training covered the following broad areas, & the detailed training Time Table is annexed to this report as Annex B.

1. The biological characteristics and requirements of the Black Soldier Fly,
2. The domestication process of the BSFL under captive breeding,
3. Essentials of BSFL reproduction in BSF rearing systems
4. Managing predators in BSFL production
5. Waste management in BSFL rearing systems
6. Managing processes in BSFL breeding/rearing systems: tools, instruments & equipment
7. Integrating BSFL production into smallholder farmer systems: social & technical considerations
8. Scaling to commercial BSFL production in Uganda: stakeholders & roles
9. Products, Opportunities and Challenges of BSFL farming
10. Feed formulation & optimization using the larvae of the black soldier fly
11. Use of herbal remedies in livestock production - as it relates to use of cow & pig dung as BSFL feed substrates
12. The practical Session/Hands-on Workshops on Production of BSFL Breeding /Rearing kits

Pre-Training Assessment

A pre-training assessment was administered by the Trainer with a three-fold purpose:

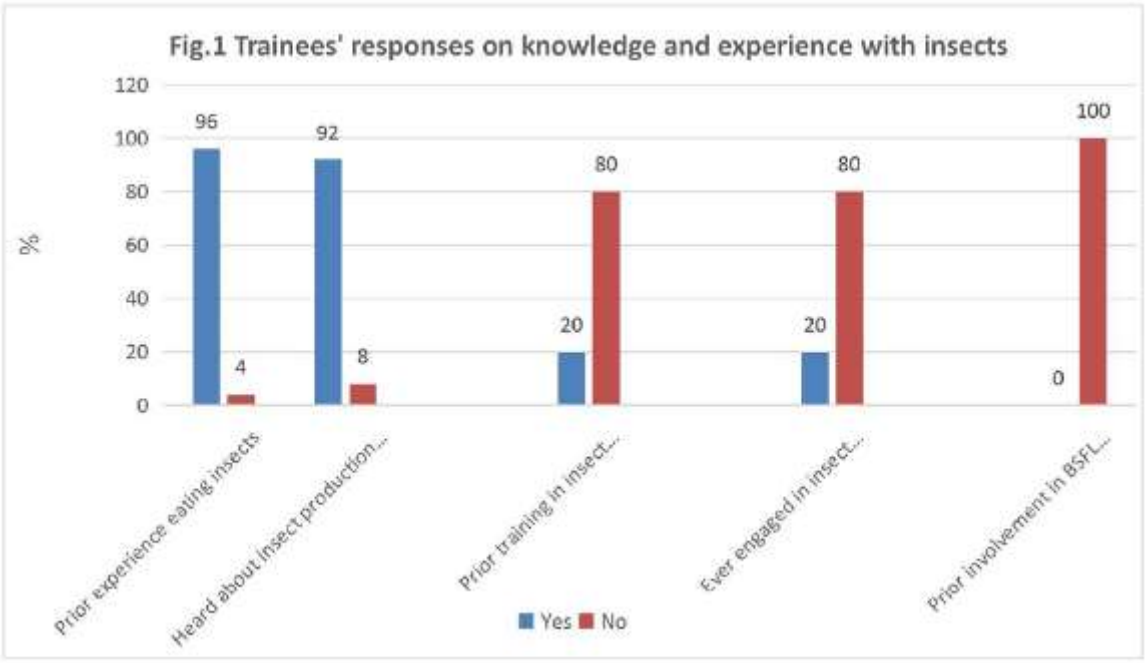
1. To establish more broadly the trainees' experience and interfaces with edible insects
2. To establish their existing knowledge or experience with BSFL production for feeds
3. To be used in evaluating the impact of the training through a comparison of the pre- and post-training results.

They were also asked about their expectations of the training and how they plan to use the knowledge and skills acquired through this training. Each trainee shared their views which they also noted down on the pre-training assessment sheets provided by the trainer. This is part of the trainers' monitoring and evaluation (M&E) procedures.

After this the session was proceeded further by the trainer explaining the main purpose of the training and the project in general and what the trainees will learn about, by pointing out major areas to be covered during the training. A summary of their responses is presented below:

Findings from the pre-training assessment

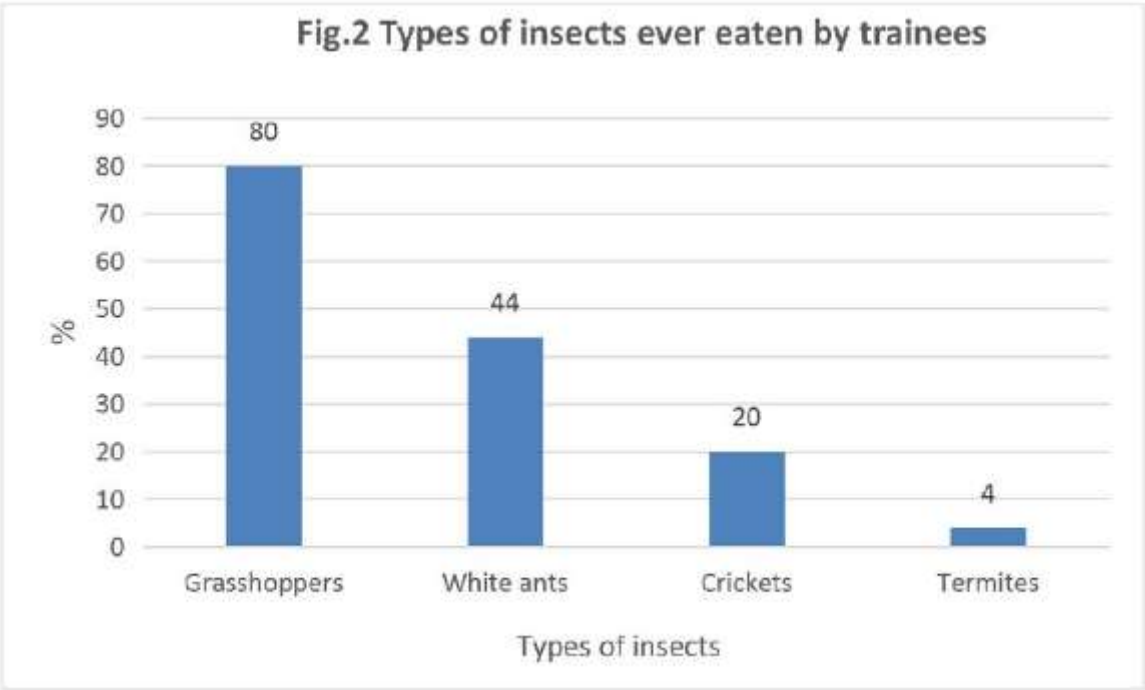
Majority of the trainees (96%) had eaten insects before with the grasshopper being the most common insect eaten. Other insects eaten by trainees included white ants, crickets and termites (Fig 2). Majority (92%) had heard about insect production for food and feeds but only 20% had ever received training in insect rearing other than BSFL. The commonest source of information for the trainees was the faculty of Agriculture itself as it had engaged in a pilot project for cricket rearing before. However, majority of the trainees had never received any training in insect production. Twenty percent (20%) of trainees said they had ever engaged in insect rearing and specifically the crickets, this shows that they can easily integrate the rearing of the black soldier fly larvae. None of the trainees reported prior experience in the production of the Black Soldier Fly larvae (Fig 1).



About their expectations of the training, the trainees' responses are summarized below:

a) To learn how to breed the BSFL

b) To get practical exposure to the breeding materials used in BSFL
c) Learn various methods of BSFL production
d) Learn how to make feeds from the BSFL (feed formulation procedures)
e) Networking with experts in BSFL production
f) Gain insight into the biology and origin of the black soldier fly
g) Get hands-on skills
h) Learn about breeding BSFL for commercial purposes
i) Learn about value addition in animal feeds
j) Learn how to market the feeds
k) Learn about the nutritional content of BSF larvae in
l) Comparison to other protein sources
m) Learn about the BSFL production process and how it can be included in animal health and public health issues if any
n) Learn how to produce insects for different purposes
o) To stimulate interest in insect growing and use
p) To understand the importance of the BSFL
q) To learn about how insects can be domesticated
r) To learn about how insects can be used for food
s) To get more knowledge and skills on the production and breeding of insects
t) To go out to the demonstration and learn from the practical bit of it
u) Learn how to sustainably breed the BSFL without upsetting other insects and members in the ecosystem
v) To acquire skills on new techniques of feed production v) To know what it is all about



About how they plan to use the knowledge and skills to be acquired through the training, they gave the following:

a) Practice it on my farm
b) To produce BSFL commercially
c) To train other farmers
d) To take it to my village and help other farmers
e) To train farmers on a new source of livelihood
f) To improve utilization of insects as human food
g) To use BSFL in feed formulation
h) Streamline it in our training at the faculty
i) Start breeding the BSFL for research purposes
j) To better my facilitation / teaching
k) To demonstrate to my community and the students the acquired skills
l) Intensify my extension training
m) Will train my family members about BSFL production &management
n) Will transfer the knowledge to the women union of 60members to which I belong

Post-training assessment

At the end of the training, we assessed the acquisition of knowledge and skills among the trainees, their confidence and readiness to train others and to run and supervise a BSFL rearing operation and how they plan to use the knowledge and skills gained. We also asked them to rate the trainers on how knowledgeable they were in the subject matter of BSFL production and its use as feeds for animals, as well as the appropriateness and adequacy of the training methodologies and tools used. This was critical given that we were preparing the trainees to become trainers of students and farmers, it was important that we release fully equipped and confident trainers that would scale up the BSFL training.

Source: *Field data (2021)*

Figure 14: Instructors making presentations to the Trainees

Source: *Field data (2021)*

Instructors included experts from a wide array of backgrounds from within Uganda and from the East African Region - ranging from Professors, to researchers involved in prototyping and day to day running of BSFL breeding / rearing operations, and experts in value added products development as well as policy stakeholders - in order to adequately expose the trainees to the essential ins and outs of managing a BSFL breeding/rearing operation and products' development from start to end and all that's in between.

i. Instructor/Facilitator-Led Training sessions

Instructor-led sessions were conducted in a more interactive style than the traditional classroom teaching. We incorporated brainstorming sessions, interactive discussions, teach-back sessions, and experience sharing to allow the participants to share their varied experiences and perspectives, sharing of case studies, breakout sessions, demonstrations as well as several question and answer sessions in addition to use of boards, power point and video presentations to keep trainees attentive and involved. Before ending the day's session the trainer would recap the topics that were discussed during the day with input from the participants. The next days would start with a recap of previous day's revision of main topics.

Source: *Field data (2021)*

ii. Group work

Trainees were broken into groups and given guiding questions to assess their understanding of the major training areas covered.

They would then present in the plenary - which was also an opportunity for them to practice their newly acquired knowledge in a teach-back setting. Some of their presentations are annexed as C

Source: *Field data (2021)*

Training workshops covered all the broad areas viz; The biological characteristics and requirements of the Black Soldier Fly; the domestication process of BSFL under captive breeding ; essential of BSF reproduction in BSF rearing systems; managing processes in BSF breeding / rearing systems & tools, instruments & equipment; Managing predators in BSFL production; Waste management in BSFL production systems; Integrating BSFL production into smallholder farmer systems; Scaling to BSFL commercial production in Uganda; BSFL farming products, opportunities and challenges; feed formulation &optimization using the larvae of the black soldier fly;

Source: *Field data (2021)*

And use of herbal remedies in livestock production - as it relates to the use of cow & pig dung as BSFL feed substrates. Then we had the practical sessions/Hands-on Workshops on BSFL breeding & rearing as well as production of BSFL breeding/rearing kits.

iii. Hands-On Training

As part of the training, participants were exposed to the BSFL breeding / rearing demonstration at Bobo Eco Farm where they were able to relate many of the theoretical sessions with the practical operations of BSFL breeding at the farm. Such particular areas included mating in captive BSF breeding systems; oviposition in captive BSF breeding systems; incubation in BSF larvae rearing; feeding the larvae & the feeding substrates feeding composition, presentation and contaminants; BSFL harvesting; and managing the bio- fertilizer bi-product.

Source: *Field data (2021)*

The breeding / rearing equipment - so they are able to take care of their BSFL rearing kits & also to train farmers and students on how to assemble insect rearing equipment.

This was experiential / hands-on training, using the following techniques:

^

Demonstrations:

Demonstrations are an excellent way to train people in new skills; like how to assemble or use new equipment or the steps in a new process. This was combined with questions and answers. Trainees had hands-on training in making insect breeding and rearing kits - both in a carpentry workshop and also in a welding workshop where they had opportunity to try them out or relate what they are learning with the reality at the BSFL breeding/rearing demonstration at Bobo Eco Farm. All necessary machinery/tools were assembled, and the mat

Source: Field data (2021)

The blend of different training methodologies utilized was meant to ensure that the participants get the whole array of stuff and concepts related to BSFL production, and they practice what they learn, because only listening to the trainers can easily be forgotten, but what the trainees do by themselves they will never forget.

Trainees making a BSF trap Below: Trainees launching their BSF trap

Findings from the staff and students training

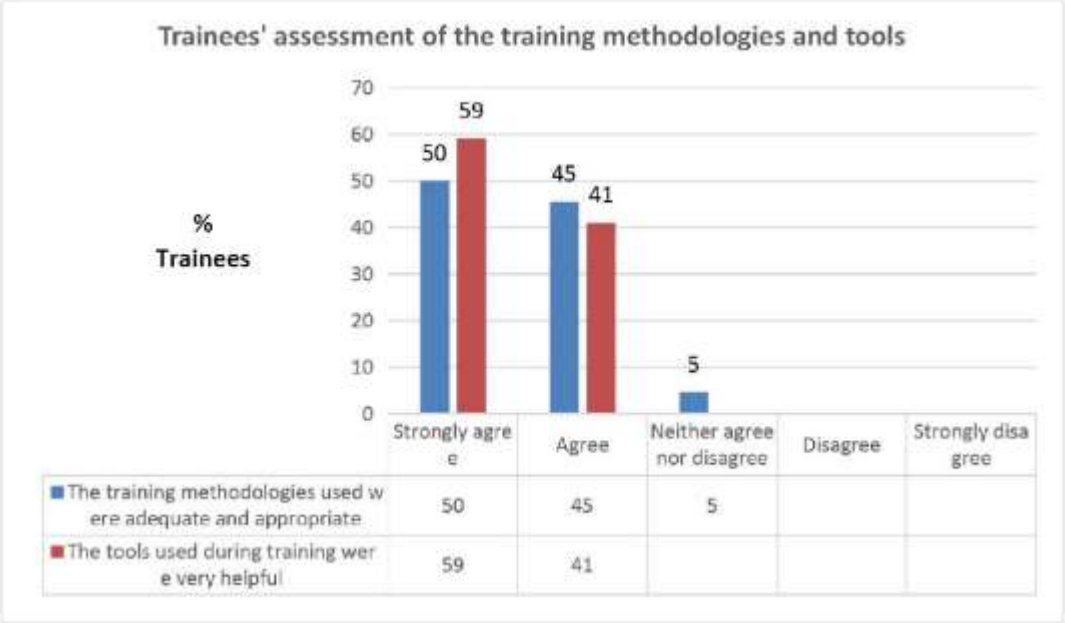
Below are the results of the assessment.

Assessment of how knowledgeable trainers were about the subject matter

All the trainees said that the trainers were knowledgeable in all areas of BSFL production with 50% saying the trainers were extremely knowledgeable, and 41% saying trainers were very knowledgeable as shown below:

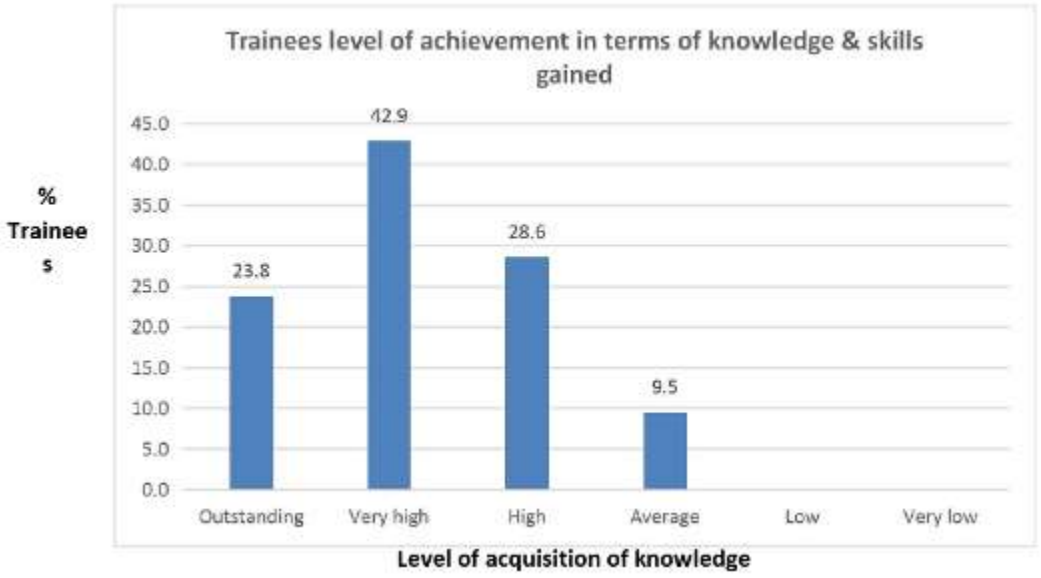
Adequacy and appropriateness of the training methodologies and tools

When asked to rate using a 5-point likert scale that ranged from strongly agree to strongly disagree the appropriateness and adequacy of the training methodologies used, 95% of trainees agreed that the training methodologies were adequate and appropriate to enable acquisition of the required knowledge and skills: 50% strongly agreed while 45% agreed. When it came to the tools used during the training, (100%) trainees agreed that the tools were very adequate and appropriate. This is shown in the figure below.



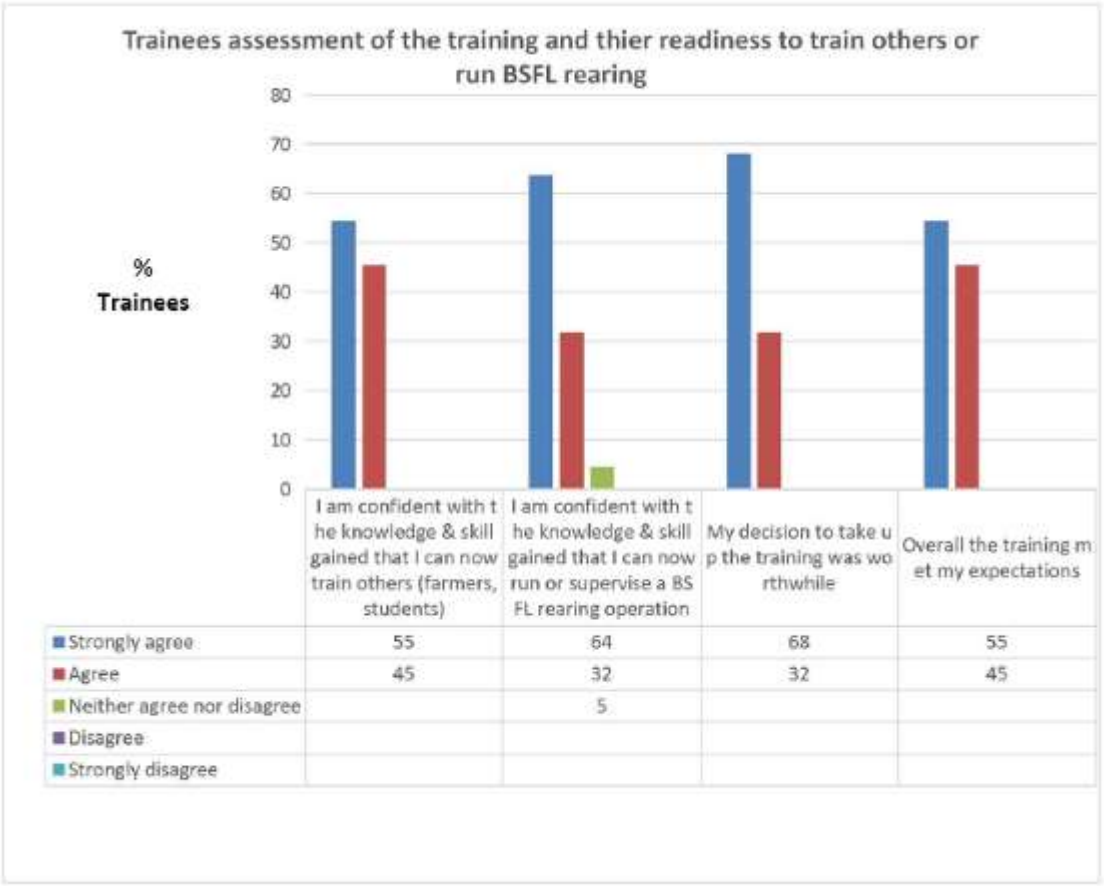
Trainees' acquisition of knowledge and skills

Two thirds of trainees rated very highly their level of achievement in acquisition of knowledge and skills with 23.8% saying that their achievement was outstanding and 42.9% saying their achievement was very high. Only less than 10% had average achievement and none score low on acquisition of knowledge and skills as shown below.



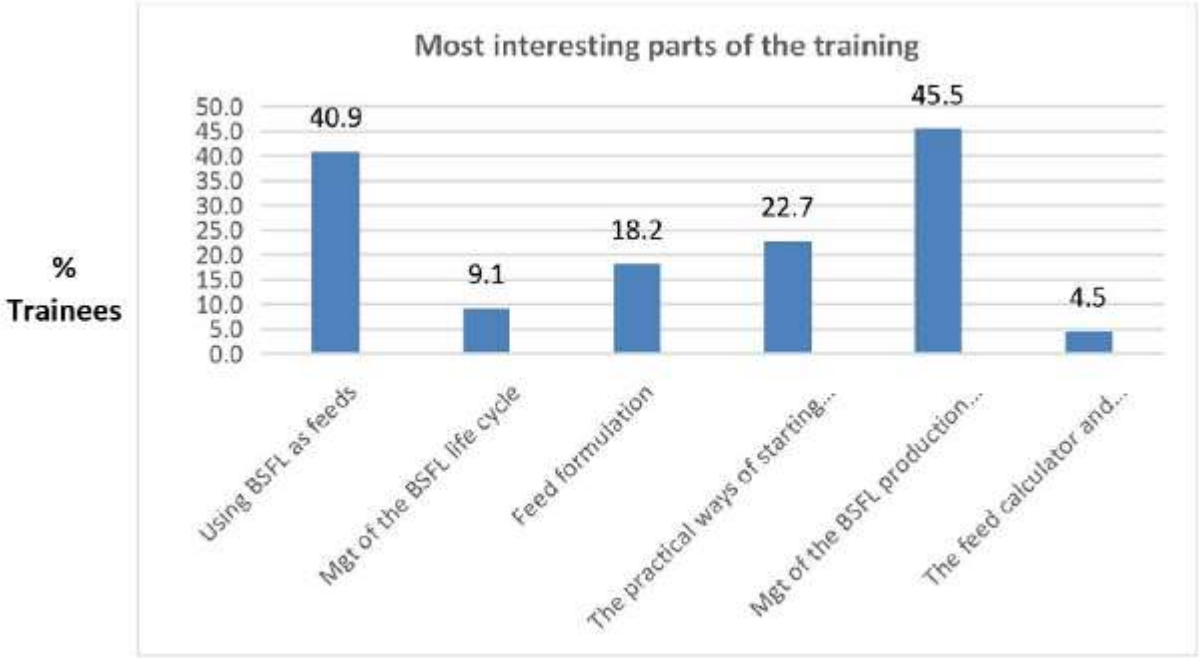
Trainees' confidence and readiness to take on the training and to supervise BSFL production

Trainees were asked to rate their confidence in training others (students and farmers) and below were their responses. All (100%) agreed that they were confident with the knowledge and skills gained that they can now train others with 55% saying they strongly agree and 45% saying they agree. Close to 100% also agreed that they are confident with the knowledge and skills gained that they can run or supervise a BSFL rearing operation; majority 64% saying they strongly agree and 32% saying they agree. All trainees agreed that their decision to take the training was worthwhile and that the training met their expectations. Quoted from one of the trainees, "We *had several add ons that we never expected to obtain from this training, like the application of herbal remedies in animal rearing, I didn't know how these would interact with the use of BSFL...this made the whole experience exceptional".* Several trainees also stressed the usefulness of the discussion groups and plenary sessions as they gave them opportunity to teach back.



Most interesting part of the training

The parts of the training that were most interesting to the trainees included the practical sessions on the management of BSFL production unit (45.5%), the practicals of using BSFL as feeds (40.9%), starting BSFL rearing and feed formulation. More interesting sessions are shown in the table of results below.



Trainees' plans to use the knowledge and skills gained from the training

We also assessed how the trainees planned to use the knowledge and skills gained and the results showed that majority (77%) planned to train others in BSFL rearing, close to two thirds (64%) plan to establish their own BSFL production units and 9% will engage in more research. These results showed an overwhelming interest in BSFL production and prospects for continuity and scalability, as well as room for continued development of the industry through further research and innovation.

Source: Field data (2021)

In conclusion, the BSFL training achieved its intended objectives of equipping the faculty of Uganda Martyrs University with knowledge and skills required to train others. We are confident the university now has enough staff capacity to run a short course on BSFL production.

4.5 Setting up a BSFL breeding / rearing demonstration unit at the faculty of agriculture, UMU to aid the eventual training of students & farmers

Another critical aspect of the project was setting up a BSFL breeding /rearing demonstration unit at Uganda Martyrs University to aid students' and farmer training in BSFL production.

A site was agreed and Bobo Eco Farm immediately began assembling the BSFL breeding kits which were eventually transferred to UMU and assembled adjacent to the university farm at the Faculty of Agriculture.

***Source**: field data (2021)*

Source: *field data (2021)*

A solar drier and a water tank was also installed to support the breeding and rearing units. The solar drier will help in drying the harvested larvae as a step in post-harvest management as well as value addition. This is part of the sustainability plan for the project.

Source: *Field data (2021)*

4.6 Development of BSFL training curriculum, manual and cartoon book to aid the eventual training of students & farmers

The BSFL training manuals were developed and are intended to serve as a reference resource for ACALISE in the training of farmers, extension staff and other cadres interested in the production of the larvae of the Black Soldier Fly *Hermetia illucens*as a livestock feed under the new short training course established at UMU. This task has also been accomplished and copies printed.

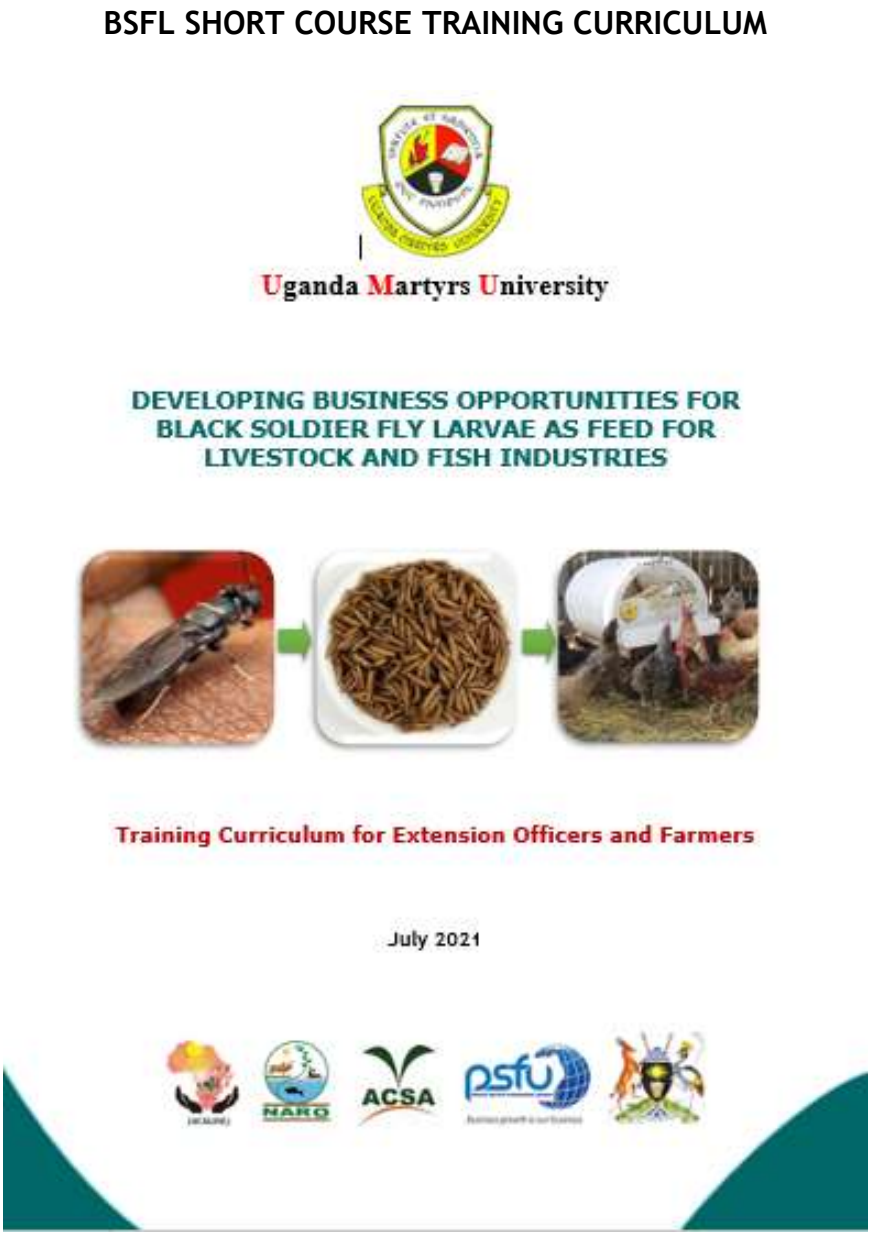


Figure 15: Cover page of the BSFL brand new curriculum developed

The training short course training curriculum was developed by Uganda Martyrs University with technical support from Dr. Kagezi Godfrey, a Senior Entomologist at National Agricultural Research Organization (NARO), through ACALISE's partnership with NARO.

The curriculum contains steps of disseminating the key information for domestication, production and processing of the black soldier fly larvae (BSFL), Hermetia illucens (Linnaeus, 1758) (Diptera: Stratiomyidae). This training is intended for a broad audience ranging from farmers to extension staff interested in the production and processing BSFL as a sustainable alternative feed resource for livestock and fish industries in Uganda.

CARTOON BOOK COVER

The black soldier fly breeding and rearing cartoon book was developed by ACALISE with technical support from Dr. Kagezi Godfrey, a Senior Entomologist through its partnership with the National Agricultural Research Organization.

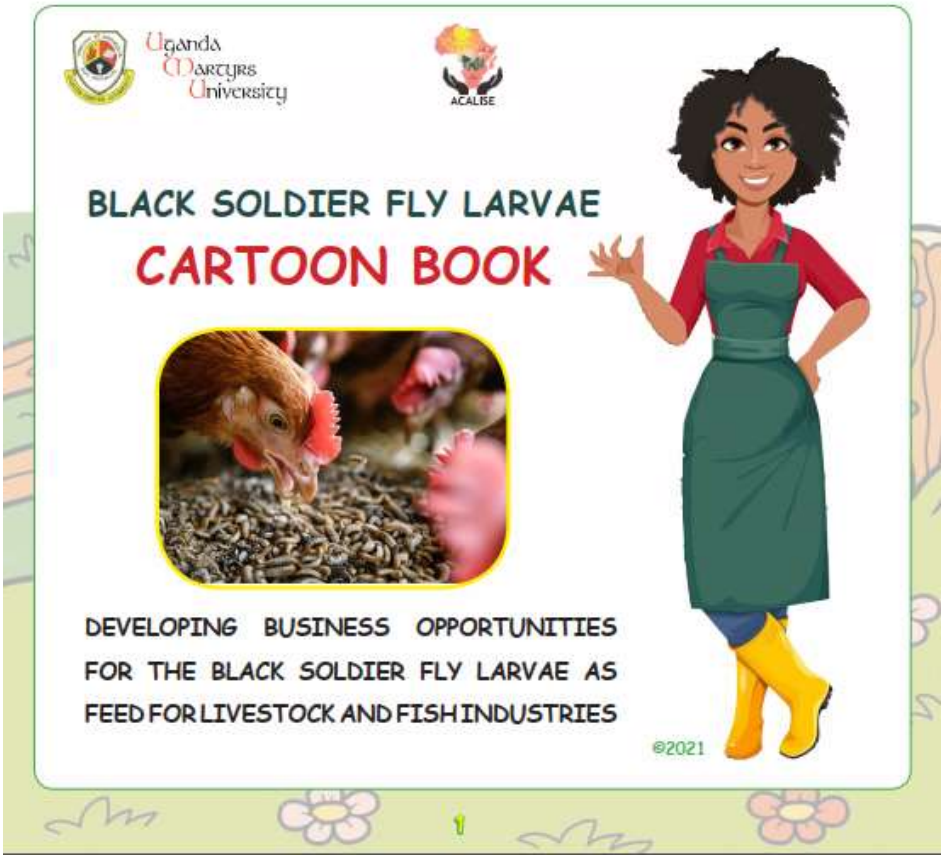


Figure 16: Cover page of the Training Cartoon Book

The Purpose of the cartoon book is to supplement the training manual by presenting the facts of black soldier fly rearing and breeding is a simple to understand style that would be easy for the farmers to understand the key concepts.

BSFL TRAINING MANUAL FOR FARMERS AND EXTENSION WORKERS

The training manual was also developed by ACALISE with technical support from by entomologists from the National Agriculture research Organisation. Various manuals for extension workers and farmers were developed.

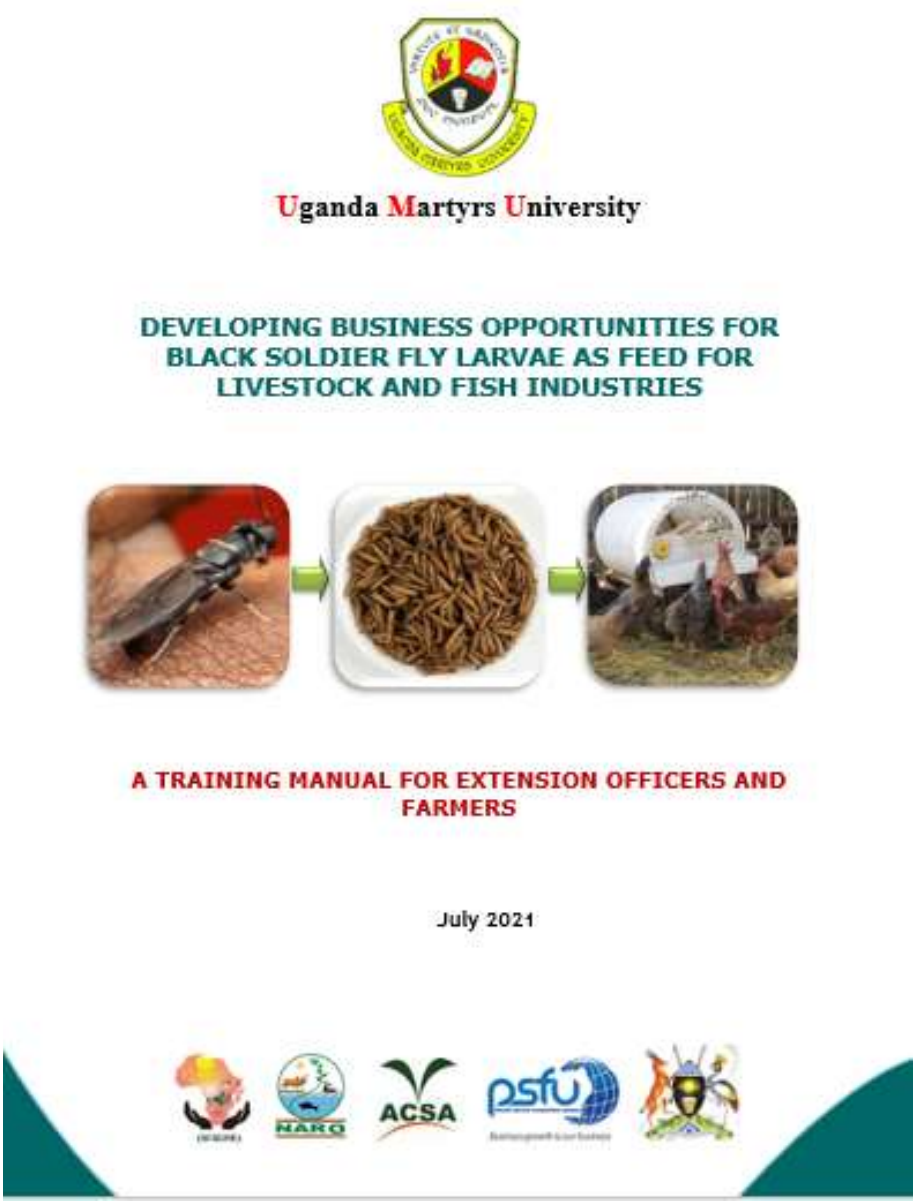


Figure 17: Cover page of the Training Manual

The Purpose of the training manuals is to serve as a reference resource in the

training a broad audience ranging from farmers, including those who cannot read nor write, to extension workers/ technical people, interested in the production and processing of the larvae of BSF as a sustainable alternative feed resource for livestock and fish industries in Uganda.

4.7 Renovation of training facilities and furnishing the conference room

Training and demonstration facilities were renovated and furnished. This will enable modern conferencing. Training will also be done in these facilities

Figure 18: BSFL training facility

Figure 19: Conference Hall of the Training facility

4.8 Waste Management Facility

Overview

Uganda Martyrs University has setup a waste management facility to collect, transfer, store, treat, and utilize waste that is a raw material for the black soldier fly larvae.

Figure 20: Kitchen and Waste collection facility

Organic waste collection facility

Organic wastes can represent a large proportion of the solid waste stream in any rural community. Furthermore, farm households generate large amounts of manure that can pose a threat to the environment, especially watercourses, if not well managed because of nutrient overloading. Much concern about air, water and soil

quality has been expressed in the past about the direct application of raw manure to agricultural land. Animal producers are being increasingly pressed upon to move towards environmental sustainability in managing the nutrients in the manure. In order to manage this, a waste management facility has been constructed at the university.

Purpose

Waste management is an important element of environmental protection. Its purpose is to provide hygienic, efficient and economic solid waste storage, collection, transportation and treatment or disposal of waste without polluting the atmosphere, soil or water system.

Benefits of the waste management facility

The main benefits of effective waste disposal include:

- Environmental protection – from pollution or contamination.
- Money generation – companies may buy recyclable materials due to their value. Additionally, the waste management industry creates employment opportunities.
- Safety – irresponsibly disposed of waste can harm people.
- Exploring alternatives – where innovative solutions to waste disposal have been found, great strides have been made i.e. composting.
- Business philosophy – as consumers become more environmentally conscious, it is important for businesses to promote their 'green' strategies and environmental promise.

4.9 The BSFL Innovation Launch

Overview

On the 24th September 2021, Uganda martyrs University launched the black soldier fly larvae innovation at the faculty of agriculture. The event took place at the site of the BSFL project, at the University Farm, Nkozi, Mpigi District. The event was officiated by Hon. Dr. Elly Karuhanga, Chairman Board Directors, PSFU. An acceptable number of participants including University Officials, academics, government officials, farmers and other stakeholders in the livestock sector physically graced the ceremony. The event was also livestreamed on U-tube, Zoom, Facebook, and other virtual platforms.

Figure 21: BSFL Launch Advert

Key highlights of the event

The well-planned event had 110 invited guests attending in person, and many other others attending virtually mainly through Zoom and U-tube. A team was also sent to the home of the Guest of Honour to broadcast him live on the function. The The event had speeches from the Implementors of the project, the researchers, farmers, Management, and the funders. Plaques of appreciation were also given to some members of the Private Sector Foundantion Uganda in appreciation for the great work.

Table 1: Program for the BSFL Innovation Launch on 24th September 2021

TIME	ACTIVITY	RESPONSIBILITY
9.00am	Arrival of guests and registration	Rose, Denis, Phiona, Andrew, Rappotouring Team
9.10am	Video presentations about the Project	Documentation Team
9.30am	Arrival of Guest of Guests from PSFU Anthems and Prayer	Rose, Denis, Phiona, Andrew Bro. Marius Murongo, Dr. Ssemakula
9.45am	Welcome remarks and overview of the PROJECT	Project Coordinator, BSFL: Dr Jude Ssebuwufu
10.00am	Remarks from Dean, Faculty of Agriculture	Dr. Pius Nina
10.15am	Health Break	Rita, Denis, Jane
10.45	15 Minute M&E Video Summary Report	M&E Team
11.00am	Remarks from VC Emeritus	Rev. Prof. John C. Maviiri
11.15am	Report from one Farmers' group	Nindye Farmer Group
11.30am	Report from International PhD student	Mr. Abdoulaye
11.45am	Remarks from Head SDF	Ms. Ruth Biyinzika Musoke
12.00 noon	Remarks from Ag. Ed of PSFU	Mr. Francis Kisirinya
12.15am	A word from the Ag VC, UMU	Rev. Dr. Christopher Mukidi
12.40am	Speech of the Guest of Honour and launch of the innovation	Hon Dr. Elly Karuhanga
1.00pm	Plaques of appreciation	Rev. Dr. Christopher Mukidi & Dr. Jude Ssebuwufu
1.15pm	Site visit	Dr. Ssemakula and Mr. Keefa
1.30pm	Lunch	Mr. Luwaga, Ms Rose, Jane
2.00pm	Questions from the Press at leisure	PRO and Dr Ssemakula

The Guest of honour, Dr. Elly Karuhanga who presided over the event virtually (through Zoom) lauded Uganda Martyrs University for coming up with such an important innovation of the black soldier fly larvae. He stressed the timeliness of the innovation to support livestock farmers with feed alternatives that have a potential of reducing the feeds costs.

The Director of ACALISE and Project Coordinator of BSFL, Dr Jude Ssebuwufu, profusely thanked PSFU for the support. He went through the entire process of

coming up with the idea of this project and how the project is already making a big difference in the lives of so many people, especially the women, youth, and most vulnerable. He explained that the demand for this innovation is so high as the Centre receives numerous calls every day from farmers from within and outside Uganda. He informed the guests that the BSFL is so special because breeding of these larvae can be done in any place, even in towns, to either directly generate income or to feed the poultry, fish, and pigs at a very low cost. The larvae are environmentally friendly and the Black Soldier fly, unlike the house fly, does not spread diseases, yet reproduces quickly. He also pointed out that these larvae can assist in managing waste as they break down all organic matter and do neutralize the bad smell within just hours. This would be very helpful to town authorities who are grappling with waste management of organic matter.

Figure 22: Dr Jude Ssebuwufu, Director of ACALISE and Project Coordinator of BSFL

The Principal Investigator presented the curriculum, training manual and cartoon book for the short course in black soldier fly rearing and breeding to Uganda Martyrs University Management.

The black soldier fly larvae sign post was setup at the gate to guide prospective trainees to the innovation demonstration and training centre.

Figure 23: Signpost for the BSFL Innovation at the main road

Publicity material such as tshirts, notebooks, pens, pull up banners and sanitizers were procured and dissemioanted accordingly to enhance awareness about the innovation of the black soldier fly larvae.

Figure 24: Dr. Joseph Ssemakula, The Principal Investigator

Figure 25: Rev. Dr. Christopher Mukidi, Ag VC UMU and Ms Mary Kajumba, Grant Specialist SDF

Figure 26: Trained farmers who represented their farmer groups

Figure 27: Members of UMU Management and other guests

5. FUNDING

The total funding of the project was UGX **1,257,869,200** with PSFU contributing 75% (i.e **939,292,000**) and 25% (i.e **318,577,200**) as local contribution from the University. While PSFU disbursed the entire sum of the grant, due to the closure of Universities during the COVID 19 lockdowns that led to cashflow challenges at UMU, the University only managed to raise a total of **305,700,000 UGX**, part of which in kind, thereby creating a shortfall by **12,877,200 UGX.** The funds were released in 3 instalments depending on the need and work plan of the activities.

6. TRAINING

UMU entered into partnership with Bobo Eco farm to train staff at the Faculty of Agriculture and establish a breeding unit at the University. Bobo was also to train the ten farmer groups on behalf of UMU.

7. STATUS ON COMPLETION

All the activities were successfully completed and validated by the stakeholders

Table 2: Activities

NO.	OUT PUT	ACTIVITY	STATUS	REMARKS
1	Train 30 Members of the Faculty	Carrying out training sessions to the faculty selected staff by BOBO with practical hands-on workshops on production of the BSFL breeding. The Partner was	Training was completed. Training materials	All activities were completed

NO.	OUT PUT	ACTIVITY	STATUS	REMARKS
		responsible for all training costs and organizing training venues. Preparation of the training report.	were procured and used. Report was prepared	
2	Set up a BSFL Breeding/ Rearing Demonstration Unit.	Procuring of materials and setting up the unit by the partner	Demonstration unit was setup	Activity completed
3	Developing Training Manuals	Development of training Manuals	Produced 45 copies of training manuals	Activity completed
4	Training 10 farmer groups	Training 10 farmer groups with breeding/ rearing skills. Setup BSFL breeding units for the farmer groups.	Training was completed, certificates awarded and black soldier fly rearing kits given to farmer trainees	Activity completed
5	Develop a training curriculum	Development of a draft curriculum to be approved by senate.	Developed a short course curriculum, training manual and a cartoon book	Activity completed
6	Establish an entomological lab and a training centre	Purchase of lab equipment. Renovation of the structure for a training centre and related offices. Furnishing of the training centre with its	Equipment were purchased. Training centre and offices were renovated. Training centre and offices and conference	Activity completed

NO.	OUT PUT	ACTIVITY	STATUS	REMARKS
		related offices.	room were furnished.	
7	Establishment of the mini feed mill	Purchase of the mini feed mill. Renovate the structure to house the feed mill.	A feed and food mills were purchased and installed.	Activity completed
8	Monitoring and Evaluation	Establishment of a frame work for M&E of the project.	CRI was contracted and paid to do the work. This was being coordinated by Dr. Ssemakula Joseph	Activity completed
9	Renovation of training facilities and furnishing a conference room	Improve the training facilities and purchase of furniture	Procurements were done	Activity completed
10	Establishing a waste collection facility	Processes were initiated	Construction were made	Activity completed
11	Other activities • Administration • Payment of casual workers • Buying feeds • Establishment of a waste collection facility	Work in progress	Work in progress	Work in progress
12	Project Launch	To be done at the end of the project with funds from the third disbursement.	Project launch was carried out.	Activity completed

8. STATUS ON FUNDS DISBURSEMENT

	FIRST DISBURSEMENT	SECOND DISBURSEMENT	THIRD DISBURSEMENT	TOTAL
PSFU	303,335,000	396,800,000	239,157,000	939,292,000
UMU CONTRIBUTION	76,000,000	99,200,000	130,500,000	305,700,000

9. FINANCIAL PERFORMANCE

UGANDA MARTYRS UNIVERSITY
PRIVATE SECTOR FOUNDATION
SKILLS DEVELOPMENT FACILITY ON BLACK SOLDIER FLY LARVAE
CONSOLIDATED BUDGET PERFORMANCE FOR THE FIRST, SECOND AND THIRD DISBURSEMENTS

Description	Budget Performance						Explanation for Variances
	Budget	Actual 1	Actual 2	Actual 3	Total Actual1 + Actual2 + Actual3	Variance	
Income							
PSFU-SDF	939,292,000	303,335,000	396,800,000	239,157,000	939,292,000	-	
UMU Contribution	318,577,200	76,000,000	99,200,000	130,500,000	305,700,000	12,877,200	Cashflow challenges due to total COVID - 19 lockdown but activity was completed
	1,257,869,200	**379,335,000**	**496,000,000**	**369,657,000**	**1,244,992,000**	**12,877,200**	
Expenditure.							
Curriculum Development	21,600,000	-	-	18,000,000	18,000,000	(3,600,000)	Activity was completed
Training Fees	234,000,000	20,000,000	214,000,000		234,000,000	-	Activity was completed
Training Costs	231,935,000	182,166,000	48,600,000		230,766,000	(1,169,000)	Activity was completed
Design and Set up of the Demo Centre	211,334,000	48,195,000	29,621,500	155,596,425	233,412,925	22,078,925	Funds for setting up another BSFL breeding unit for farmers was re-allocate to this vote.
Tools and Instruction Materials	5,047,200	-		1,750,000	1,750,000	(3,297,200)	Activity was completed
Equipment of a Mini Entomological Laboratory and Mini Feed Mill	375,100,000	124,749,000		249,385,269	374,134,269	(965,731)	Activity was completed
Equipping Ten Farmer Groups with BSFL Rearing Skills	49,600,000	-		49,760,000	49,760,000	160,000	There was need to observe SOPs because of COVID - 19 which was not budgeted for in the beginning.
Set up BSFL Breeding Unit for Farmer Groups	21,333,000	-	-		-		
Monitoring and Evaluation	55,920,000	-	51,580,000	11,000,000	62,580,000	6,660,000	The Project period was extended due to COVID - 19 pandemic which raised more administrative costs
Utilities	14,000,000	-	-	14,000,000	14,000,000	-	
Project Launch	38,000,000	-	-	25,732,000	25,732,000	(12,268,000)	Activity was completed
Bank Charges					731,825		Bank charges for the entire project life
Bank balance B/F					124,981		This is the balance on the account which can contribute to maintanence of BSFL breeding Unit
TOTATLS	**1,257,869,200**	**375,110,000**	**343,801,500**	**525,223,694**	**1,244,992,000**	**7,598,994**	

Actual 1 = Actual income and expenditure for the 1st Disbursement
Actual 2 = Actual income and expenditure for the 2nd Disbursement
Actual 3 = Actual income and expenditure for the 3rd and final Disbursement

UGANDA MARTYRS UNIVERSITY
PRIVATE SECTOR FOUNDATION
SKILLS DEVELOPMENT FACILITY ON BLACK SOLDIER FLY LARVAE
STATEMENT OF EXPENDITURE FOR THE THIRD DISBURSEMENT

DATE	VOUCHER NUMBER	PAYEE	DESCRIPTION	AMOUNT
			CURRICULUM DEVELOPMENT	
7/19/2021	V33111/C258	SSEMAKULA JOSEPH	Funds towards development of the BSFL curriculum	18,000,000.00
			DESIGN AND SET UP OF THE DEMO CENTRE	
5/19/2021	V31404/C250	MASALAND INV LTD	Payment for renovations at BSFL	20,000,000.00
5/19/2021	V31404/C251	MASALAND INV LTD	Payment for renovations at BSFL	8,762,000.00
5/25/2021	V31427/C252	BOBO ECO FARM LTD	Making Breeding and rearing units and installation	46,216,800.00
6/10/2021	V31474/C255	Marianum Press Ltd	Printing and scanning	240,500.00
6/10/2021	V31474/C255	Lugem catering	Payment for Meals supplied to workers at BSFL Project	1,244,000.00
6/10/2021	V31474/C255	Sserwadda Emmanuel	Repair costs for the BSFL breeding unit	476,000.00
6/10/2021	V31474/C255	SSENDAGIRE DAN	Wages for March, April and May 2021	910,000.00
6/10/2021	V31474/C255	MUJULIZI ARCHANGEL	Wages for March, April and May 2021	910,000.00
6/10/2021	V31474/C255	KATO DEVIS	Wages for March, April and May 2021	1,820,000.00
6/16/2021	V31432/C253	LEGITEX SOLUTIONS LTD	Supply of BSFL project consumables	778,000.00
9/4/2021	V33160/C259	ZAAKA FEEDS	Supply of feeds at BSFL Project	460,000.00
9/7/2021	V33175/C261	SSENDAGIRE DAN	Wages for June, July and August 2021	900,000.00
9/7/2021	V33175/C261	MUJULIZI ARCHANGEL	Wages for June, July and August 2021	900,000.00
9/7/2021	V33175/C261	KATO DEVIS	Wages for June, July and August 2021	1,800,000.00
9/8/2021	V33174/C260	Marianum Press Ltd	Printing and scanning BSFL documents	986,000.00
9/8/2021	V33174/C260	MASALAND INV LTD	Construction of a waste collection facility and kitchen	45,937,125.00
9/8/2021	V33174/C260	Erimu Company Ltd	Supply of furniture	22,000,000.00
10/15/2021	V31648/C263	Lugem catering	Payment for Meals supplied to workers at BSFL Project	1,256,000.00
			TOTAL	**155,596,425.00**
5/7/2021	V31041/C248	COMPUNET TECHNOLOGIES	**TOOLS AND INSTRUCTION MATERIALS** Supply of Epson projector and projector screen	1,750,000.00
			EQUIPPING A MINI ENTOMOLOGICAL LABORATORY AND A MINI FEED MILL	
9/8/2021	V33174/C260	CHINA HUANGPAI	Supply of the feed mill, huller and other components	77,900,000.00
9/8/2021	V33174/C260	Palin Corporation Ltd	Supply of the laboratory equipment 70% payment	45,485,664.00
		BSFL Project	Structure housing the feed mill (IN KIND)	85,000,000.00
		BSFL Project	Design, set up and maintainance of the breeding unit (IN KIND)	21,500,000.00
10/15/2021	V31648/C263	Palin Corporation Ltd	Supply of the laboratory equipment 30% payment	19,499,605.00
			TOTAL	**249,385,269.00**
			EQUIPING 10 FARMER GROUPS WITH BSFL REARING SKILLS	
5/25/2021	V31427/C252	BOBO ECO FARM LTD	Training farmer groups on BSFL rearing skills	49,760,000.00
			MONITORING AND EVALUATION	
6/24/2021	V31491/C257	Allan Muzindwa Ssenyondwa	Corporate social responsibility	1,000,000.00
8/13/2020	V32286/C227	BSFL Project Staff	Project Staff time (IN KIND)	10,000,000.00
			TOTAL	**11,000,000.00**
			UTILITIES	
		BSFL Project	Utilities (IN KIND)	14,000,000
			PROJECT LAUNCH	
9/22/2021	V33199/C262	Nakiboneka Cissy	Funds for launching BSFL project on 24/09/2021	25,732,000.00
			GRAND TOTAL	**525,223,694.00**

SUMMARY FOR THE CERTIFICATE OF PROJECT COMPLETION

Project Costs	Project Budget	Project Actuals
Curriculum Development	21,600,000	18,000,000
Training Fees	234,000,000	234,000,000
Training Costs	231,935,000	230,766,000
Design and Set up of the Demo Centre	211,334,000	233,412,925
Tools and Instruction Materials	5,047,200	1,750,000
Equipment of a Mini Entomological Laboratory and Mini Feed Mill	375,100,000	374,134,269
Equipping Ten Farmer Groups with BSFL Rearing Skills	49,600,000	49,760,000
Set up BSFL Breeding Unit for Farmer Groups	21,333,000	
Monitoring and Evaluation	55,920,000	62,580,000
Utilities	14,000,000	14,000,000
Project Launch	38,000,000	25,732,000
Bank Charges		731,825
Bank balance B/F as at		124,981
Project Totals	**1,257,869,200**	**1,244,992,000**

10. BANK STATEMENT FOR THE ENTIRE PROJECT PERIOD

Centenary Bank

DEMAND DEPOSIT STATEMENT

...our bank

Branch:	KAYABWE	Telephone |e-mail:	039-2751788 | INFO.CENTENARYBANK.CO.UG
Branch address:	MASAKA-K'LA RD, MPIGI	Date | Time:	10/18/2021
Account Name:	UGANDA MARTYRS UNIVERSITY SPORTS ACCOUNT	Account Number:	3100053537-0 UGX
Address :		Product:	31241 CURRENT ASSOCIATIONS/CLUBS ORDINARY
Period:	From 31-07-2018 To 16-10-2021	PAGE:	1 of 7
1st Beneficiary :	106789 - 0	JOSEPH SSEMBATYA	
2nd Beneficiary:	106789 - 0	JOSEPH SSEMBATYA	
3rd Beneficiary :	0-0		

Transaction Date	Value Date	Transaction Description	Cheque No.	Debits	Credits	Balance
31-07-2018		**OPENING BALANCE**		11,000.00		11,803,300.00
	01-08-2018	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS			0.00	11,792,300.00
31-07-2018	01-08-2018	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	11,790,650.00
27-08-2018	27-08-2018	JOURNAL CREDIT Support UCU soccer and basket ball teams		0.00	5,000,000.00	16,790,650.00
31-08-2018	01-09-2018	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	16,779,650.00
31-08-2018	01-09-2018	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	16,778,000.00
29-09-2018	01-10-2018	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	16,767,000.00
29-09-2018	01-10-2018	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	16,765,350.00
31-10-2018	01-11-2018	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	16,754,350.00
31-10-2018	01-11-2018	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	16,752,700.00
30-11-2018	01-12-2018	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	16,741,700.00
30-11-2018	01-12-2018	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	16,740,050.00
31-12-2018	02-01-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	16,729,050.00
31-12-2018	02-01-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	16,727,400.00
31-01-2019	01-02-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	16,716,400.00
31-01-2019	01-02-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	16,714,750.00

21-02-2019	21-02-2019	RTGS INCOMING PAYMENT ORDER. Reference Number CD/169482/19 UGANDA MARTYRS UNIVERSITY		0.00	76,000,000.00	92,714,750.00
21-02-2019	21-02-2019	COMMISSION ON TRANSACTION INCOMING PAYMENT ORDER.		2,000.00	0.00	92,712,750.00
		Reference Number CD/169482/19 UGANDA MARTYRS UNIVERSITY				
27-02-2019	27-02-2019	STATEMENT PER PG		2,500.00	0.00	92,710,250.00
27-02-2019	27-02-2019	TAX ON COMMISSION EXCISE DUTY		375.00	0.00	92,709,875.00
28-02-2019	01-03-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	92,698,875.00
28-02-2019	01-03-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	92,697,225.00
05-03-2019	05-03-2019	IN HOUSE CHEQUES CQ 000001 IFO UGANDA MARTYRS UNIV	1-2	16,714,750.00	0.00	75,982,475.00
14-03-2019	14-03-2019	JOURNAL CREDIT STP NO SNI EFT-ORDER 22200164 MOFPED-SDP 11032019		0.00	303,335,000.00	379,317,475.00
14-03-2019	14-03-2019	COMMISSION INCOMING EFT COMMISSION INCOMING EFT		3,000.00	0.00	379,314,475.00
30-03-2019	01-04-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	379,303,475.00
30-03-2019	01-04-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	379,301,825.00
02-04-2019	02-04-2019	CASH WITHDRAW-CHEQUE ONLY CQ 2 IFO DEO	2-2	20,000,000.00	0.00	359,301,825.00
04-04-2019	04-04-2019	AUTO CHEQUE CLEARING	3-2	20,000,000.00	0.00	339,301,825.00
15-04-2019	15-04-2019	COMMISSION ON TRANSACTION Cheque Book Charge 100pg		160,000.00	0.00	339,141,825.00
15-04-2019	15-04-2019	TAX ON COMMISSION EXCISE DUTY		24,000.00	0.00	339,117,825.00
18-04-2019	18-04-2019	CASH WITHDRAW-CHEQUE ONLY CQ 202 IFO OWILLO DEO	202-7	20,000,000.00	0.00	319,117,825.00
18-04-2019	18-04-2019	P.O RTGS OUTGOING INTERBANK P/O. 00039/88145 P.O.ifo BOBO ECO FARM LIMITED		130,201,000.00	0.00	188,916,825.00
18-04-2019	18-04-2019	PO OUTGOING COMMISSION OUTGOING INTERBANK P/O. 00039/88145 P.O.ifo BOBO ECO FARM LIMITED		15,000.00	0.00	188,901,825.00
30-04-2019	02-05-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	188,890,825.00
30-04-2019	02-05-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	188,889,175.00
31-05-2019	01-06-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	188,878,175.00
31-05-2019	01-06-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	188,876,525.00
06-06-2019	06-06-2019	CASH WITHDRAW-CHEQUE ONLY IFO DEO OWILLI NI CM91070100H6UE	203-7	8,000,000.00	0.00	180,876,525.00
29-06-2019	01-07-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	180,865,525.00
29-06-2019	01-07-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	180,863,875.00
09-07-2019	09-07-2019	STATEMENT PER PG		5,000.00	0.00	180,858,875.00

09-07-2019	09-07-2019	TAX ON COMMISSION EXCISE DUTY		750.00	0.00	180,858,125.00
31-07-2019	01-08-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	180,847,125.00
31-07-2019	01-08-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	180,845,475.00
08-08-2019	08-08-2019	P.O RTGS OUTGOING INTERBANK P/O. 00039/102427 P.O.ifo BOBO ECO FARM LIMITED		100,134,000.00	0.00	80,711,475.00
08-08-2019	08-08-2019	PO OUTGOING COMMISSION OUTGOING INTERBANK P/O. 00039/102427 P.O.ifo BOBO ECO FARM LIMITED		15,000.00	0.00	80,696,475.00
09-08-2019	09-08-2019	IN HOUSE CHEQUES CQ 204 IFO SENYONGA ABASI	204-7	4,999,000.00	0.00	75,697,475.00
09-08-2019	09-08-2019	IN HOUSE CHEQUES CQ 205 IFO SENYONGA ABASI	205-7	20,000,000.00	0.00	55,697,475.00
21-08-2019	21-08-2019	STATEMENT PER PG		2,500.00	0.00	55,694,975.00
21-08-2019	21-08-2019	TAX ON COMMISSION EXCISE DUTY		375.00	0.00	55,694,600.00
31-08-2019	02-09-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	55,683,600.00
31-08-2019	02-09-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	55,681,950.00
02-09-2019	02-09-2019	IN HOUSE CHEQUES CHQ 207 TO GLOBAL TRUST CONSULTS LTD	207-7	7,000,000.00	0.00	48,681,950.00
30-09-2019	01-10-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	48,670,950.00
30-09-2019	01-10-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	48,669,300.00
30-09-2019	30-09-2019	JOURNAL DEBIT PYT IFO CERTIFICATE OF BALANCE		23,000.00	0.00	48,646,300.00
31-10-2019	01-11-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	48,635,300.00
31-10-2019	01-11-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	48,633,650.00
08-11-2019	08-11-2019	IN HOUSE CHEQUES CQ 000210 IFO SENYONGA ABASI	210-7	44,750,000.00	0.00	3,883,650.00
12-11-2019	12-11-2019	STATEMENT PER PG		5,000.00	0.00	3,878,650.00
12-11-2019	12-11-2019	TAX ON COMMISSION EXCISE DUTY		750.00	0.00	3,877,900.00
30-11-2019	02-12-2019	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	3,866,900.00
30-11-2019	02-12-2019	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	3,865,250.00
31-12-2019	02-01-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	3,854,250.00
31-12-2019	02-01-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	3,852,600.00
13-01-2020	13-01-2020	IN HOUSE CHEQUES CQ 000025 FRM AFRICAN CENTRE OF EXCELLEN		0.00	59,200,000.00	63,052,600.00
14-01-2020	14-01-2020	DEPOSIT CASH SSEMAKULA RICHRAD		0.00	40,000,000.00	103,052,600.00
31-01-2020	01-02-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	103,041,600.00
31-01-2020	01-02-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	103,039,950.00

29-02-2020	02-03-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	103,028,950.00
29-02-2020	02-03-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	103,027,300.00
31-03-2020	01-04-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	103,016,300.00
31-03-2020	01-04-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	103,014,650.00
01-04-2020	01-04-2020	JOURNAL CREDIT STP NO SNI EFT-ORDER 28818150 MOFPED-SDP 27032020		0.00	396,800,000.00	499,814,650.00
01-04-2020	01-04-2020	COMMISSION INCOMING EFT COMMISSION INCOMING EFT		3,500.00	0.00	499,811,150.00
30-04-2020	02-05-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	499,800,150.00
30-04-2020	02-05-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	499,798,500.00
30-05-2020	01-06-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	499,787,500.00
30-05-2020	01-06-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	499,785,850.00
30-06-2020	01-07-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	499,774,850.00
30-06-2020	01-07-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	499,773,200.00
08-07-2020	08-07-2020	STATEMENT PER PG		3,000.00	0.00	499,770,200.00
08-07-2020	08-07-2020	TAX ON COMMISSION EXCISE DUTY		450.00	0.00	499,769,750.00
24-07-2020	24-07-2020	STATEMENT PER PG		6,000.00	0.00	499,763,750.00
24-07-2020	24-07-2020	TAX ON COMMISSION EXCISE DUTY		900.00	0.00	499,762,850.00
30-07-2020	01-08-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	499,751,850.00
30-07-2020	01-08-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	499,750,200.00
15-08-2020	15-08-2020	IN HOUSE CHEQUES CH 227 IFO JOSEPH SSEMBATYA	227-7	1,200,000.00	0.00	498,550,200.00
17-08-2020	17-08-2020	P.O RTGS OUTGOING INTERBANK P/O. 00039/153037 P.O.ifo BOBO ECO FARM LIMITED	229-7	262,600,000.00	0.00	235,950,200.00
17-08-2020	17-08-2020	PO OUTGOING COMMISSION OUTGOING INTERBANK P/O. 00039/153037 P.O.ifo BOBO ECO FARM LIMITED		15,500.00	0.00	235,934,700.00
17-08-2020	17-08-2020	IN HOUSE CHEQUES CHQ 225 IFO KAFUUMA GERALD	225-7	940,000.00	0.00	234,994,700.00
17-08-2020	17-08-2020	IN HOUSE CHEQUES Sn:1192628	217-7	2,010,000.00	0.00	232,984,700.00
17-08-2020	17-08-2020	IN HOUSE CHEQUES CHQ 213 IFO SSENDAGIRE DANIEL	213-7	2,440,000.00	0.00	230,544,700.00
17-08-2020	17-08-2020	IN HOUSE CHEQUES CHQ 216 IFO KATO DEVIS	216-7	7,320,000.00	0.00	223,224,700.00
18-08-2020	18-08-2020	IN HOUSE CHEQUES CHQ 228 IFO ZAAKA KIVUMBI ENTERPRISE	228-7	1,329,000.00	0.00	221,895,700.00
18-08-2020	18-08-2020	IN HOUSE CHEQUES CHQ 222 IFO ROSE NALUGO	222-7	2,295,000.00	0.00	219,600,700.00
19-08-2020	19-08-2020	AUTO CHEQUE CLEARING	221-7	4,550,000.00	0.00	215,050,700.00
19-08-2020	19-08-2020	IN HOUSE CHEQUES Sn:1194116	219-7	1,135,000.00	0.00	213,915,700.00
19-08-2020	19-08-2020	IN HOUSE CHEQUES CHQ 220 IFO RICHARD SSEMAKULA	220-7	2,100,000.00	0.00	211,815,700.00

21-08-2020	21-08-2020	IN HOUSE CHEQUES CHQ 223 IFO THEOPISTA NAMUTEBI	223-7	922,500.00	0.00	210,893,200.00
21-08-2020	21-08-2020	IN HOUSE CHEQUES CHQ 226 IFO JOSEPH SSEKANDI	226-7	3,125,000.00	0.00	207,768,200.00
28-08-2020	28-08-2020	IN HOUSE CHEQUES CHQ 230 IFO MAVIIRI JOHN C	230-7	1,300,000.00	0.00	206,468,200.00
31-08-2020	01-09-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	206,457,200.00
31-08-2020	01-09-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	206,455,550.00
31-08-2020	01-09-2020	COMMISSION ON TRANSACTION		2,000.00	0.00	206,453,550.00
31-08-2020	01-09-2020	TAX ON COMMISSION EXCISE DUTY		300.00	0.00	206,453,250.00
03-09-2020	03-09-2020	IN HOUSE CHEQUES CHQ 231 IFO ARCHANGEL MUJURIZI	231-7	2,440,000.00	0.00	204,013,250.00
11-09-2020	11-09-2020	COMMISSION ON TRANSACTION Certificate of Balance		20,000.00	0.00	203,993,250.00
11-09-2020	11-09-2020	TAX ON COMMISSION EXCISE DUTY		3,000.00	0.00	203,990,250.00
30-09-2020	01-10-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	203,979,250.00
30-09-2020	01-10-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	203,977,600.00
07-10-2020	07-10-2020	STATEMENT PER PG		3,000.00	0.00	203,974,600.00
07-10-2020	07-10-2020	TAX ON COMMISSION EXCISE DUTY		450.00	0.00	203,974,150.00
31-10-2020	02-11-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	203,963,150.00
31-10-2020	02-11-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	203,961,500.00
05-11-2020	05-11-2020	STATEMENT PER PG		3,000.00	0.00	203,958,500.00
05-11-2020	05-11-2020	TAX ON COMMISSION EXCISE DUTY		450.00	0.00	203,958,050.00
20-11-2020	20-11-2020	IN HOUSE CHEQUES CHQ 233 IFO GEORGE LUYOMBYA	233-7	1,160,000.00	0.00	202,798,050.00
21-11-2020	21-11-2020	IN HOUSE CHEQUES CHQ 234 IFO DANNIEL SSENDAGIRE	234-7	920,000.00	0.00	201,878,050.00
21-11-2020	21-11-2020	IN HOUSE CHEQUES CHQ 235 IFO MUJURIZI ARCHANGEL	235-7	920,000.00	0.00	200,958,050.00
23-11-2020	23-11-2020	IN HOUSE CHEQUES CHWQ 232 IFO KATO DEVIS	232-7	1,840,000.00	0.00	199,118,050.00
27-11-2020	27-11-2020	IN HOUSE CHEQUES CHQ 236 IFO COMMUNICATION RESEARCH & INN	236-7	20,000,000.00	0.00	179,118,050.00
27-11-2020	27-11-2020	IN HOUSE CHEQUES CHQ 237 IFO COMMUNICATION RESEARCH & INN	237-7	15,000,000.00	0.00	164,118,050.00
30-11-2020	01-12-2020	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	164,107,050.00
30-11-2020	01-12-2020	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	164,105,400.00
11-12-2020	11-12-2020	IN HOUSE CHEQUES CQ 238 IFO ZAAKA KIVUMBI ENT	238-7	425,000.00	0.00	163,680,400.00
31-12-2020	02-01-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	163,669,400.00
31-12-2020	02-01-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	163,667,750.00
28-01-2021	28-01-2021	IN HOUSE CHEQUES CHQ 240 IFO ARCHANGEL MUJURIZI	240-7	610,000.00	0.00	163,057,750.00

28-01-2021	28-01-2021	IN HOUSE CHEQUES CHQ 242 IFO DANNIEL SSENDAGIRE	242-7	610,000.00	0.00	162,447,750.00
29-01-2021	29-01-2021	IN HOUSE CHEQUES CHQ 241 IFO KATO DEVIS	241-7	1,220,000.00	0.00	161,227,750.00
30-01-2021	01-02-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	161,216,750.00
30-01-2021	01-02-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	161,215,100.00
09-02-2021	09-02-2021	STATEMENT PER PG		8,000.00	0.00	161,207,100.00
09-02-2021	09-02-2021	TAX ON COMMISSION EXCISE DUTY		1,200.00	0.00	161,205,900.00
24-02-2021	24-02-2021	IN HOUSE CHEQUES CHQ 243 IFO LUYOMBA GEEORGR	243-7	1,120,000.00	0.00	160,085,900.00
27-02-2021	01-03-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	160,074,900.00
27-02-2021	01-03-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	160,073,250.00
31-03-2021	01-04-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	160,062,250.00
31-03-2021	01-04-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	160,060,600.00
01-04-2021	01-04-2021	IN HOUSE CHEQUES CQ 246 IFO SSENDAGIRE DANIEL	246-7	590,000.00	0.00	159,470,600.00
01-04-2021	01-04-2021	IN HOUSE CHEQUES CQ 244 IFO MUJURIZI ARCHANGEL	244-7	590,000.00	0.00	158,880,600.00
07-04-2021	07-04-2021	IN HOUSE CHEQUES CHQ 245 IFO UMU	245-7	1,180,000.00	0.00	157,700,600.00
22-04-2021	22-04-2021	IN HOUSE CHEQUES CQ 247 IFO ZAAKA KIVUMBI ENTERPRISES	247-7	1,910,000.00	0.00	155,790,600.00
30-04-2021	03-05-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	155,779,600.00
30-04-2021	03-05-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	155,777,950.00
07-05-2021	07-05-2021	CHEQUE PAYMENT-NON CASH CHQ 248 IFO COMPUNET TECHNOLOGIES	248-7	1,750,000.00	0.00	154,027,950.00
19-05-2021	19-05-2021	CHEQUE PAYMENT-NON CASH CHQ IFO MASALAND INVESTMENTS LIMITED	250-7	20,000,000.00	0.00	134,027,950.00
19-05-2021	19-05-2021	CHEQUE PAYMENT-NON CASH	251-7	8,762,000.00	0.00	125,265,950.00

		CHQ IFO MASALAND INVESTMENTS LIMITED				
25-05-2021	25-05-2021	JOURNAL DEBIT OUTGOING INTERBANK P/O. 00039/200480 P.O.ifo BOBO ECO FARM LIMITED		95,976,800.00	0.00	29,289,150.00
25-05-2021	25-05-2021	PO OUTGOING COMMISSION OUTGOING INTERBANK P/O. 00039/200480 P.O.ifo BOBO ECO FARM LIMITED		15,500.00	0.00	29,273,650.00
31-05-2021	01-06-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	29,262,650.00
31-05-2021	01-06-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	29,261,000.00
10-06-2021	10-06-2021	IN HOUSE CHEQUES CHQ 254 IFO DERRICK SSEGAWA	254-7	4,255,500.00	0.00	25,005,500.00
10-06-2021	10-06-2021	IN HOUSE CHEQUES CHQ 255 IFO UMU SALARY	255-7	5,600,500.00	0.00	19,405,000.00
16-06-2021	16-06-2021	AUTO CHEQUE CLEARING	253-7	778,000.00	0.00	18,627,000.00
24-06-2021	24-06-2021	CASH WITHDRAW-CHEQUE ONLY CHQ IFO ARNOLD BATTE	257-7	1,000,000.00	0.00	17,627,000.00

OVERDRAFT LIMIT:	0.00	**UNPAID CHEQUE AMOUNT:**	0.00
OVERDRAFT EXPIRY DATE:	4/16/2018 12:00:00 AM		

24-06-2021	24-06-2021	IN HOUSE CHEQUES CHQ 256 IFO DERRICK SSEGAWA	256-7	4,255,500.00	0.00	13,371,500.00
30-06-2021	01-07-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	13,360,500.00
30-06-2021	01-07-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	13,358,850.00
08-07-2021	08-07-2021	IN HOUSE CHEQUES CHQ 1446 IFO UMU		0.00	8,511,000.00	21,869,850.00
19-07-2021	19-07-2021	IN HOUSE CHEQUES CHQ 258 IFO JOSEPH SENTAMU SSEMAKULA	258-7	18,000,000.00	0.00	3,869,850.00
31-07-2021	02-08-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	3,858,850.00
31-07-2021	02-08-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	3,857,200.00
09-08-2021	09-08-2021	JOURNAL CREDIT STP NO SNI EFT-ORDER PRIVATE SECTOR FOUNDATION UGAN		0.00	239,157,000.00	243,014,200.00
09-08-2021	09-08-2021	COMMISSION INCOMING EFT COMMISSION INCOMING EFT		3,500.00	0.00	243,010,700.00
31-08-2021	01-09-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	242,999,700.00
31-08-2021	01-09-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	242,998,050.00
04-09-2021	04-09-2021	JOURNAL DEBIT CHQ 259 ZAKA KIVUMBI ENTER		460,000.00	0.00	242,538,050.00
07-09-2021	07-09-2021	IN HOUSE CHEQUES CHQ 261 IFO UMU SALARY	261-7	3,600,000.00	0.00	238,938,050.00
08-09-2021	08-09-2021	IN HOUSE CHEQUES CHQ 260 IFO UMU SALARY	260-7	194,312,814.00	0.00	44,625,236.00
22-09-2021	22-09-2021	CASH WITHDRAW-CHEQUE ONLY ARNOLD BATTE	262-7	25,732,000.00	0.00	18,893,236.00
30-09-2021	01-10-2021	COMMISSION ON TRANSACTION LEDGER FEES CURRENT ACCOUNTS		11,000.00	0.00	18,882,236.00
30-09-2021	01-10-2021	TAX ON COMMISSION EXCISE DUTY		1,650.00	0.00	18,880,586.00
01-10-2021	05-10-2021	CHEQUE DEPOSIT OF OTHER B 000600 CHINA HUANGPAI FOOD MACHINE UGAND		0.00	2,000,000.00	20,880,586.00
15-10-2021	15-10-2021	IN HOUSE CHEQUES UMU SALARY CHQ 263	263-7	20,755,605.00	0.00	124,981.00

BOOK BALANCE:	124,981.00	**SUMMARY OF TRANSACTIONS**	
AVAILABLE BALANCE:	124,981.00	**TOTAL CREDITS:**	1,130,003,000.00
UNCLEAR BALANCE:	0.00	**TOTAL DEBITS:**	1,141,681,319.00
BLOCKED BALANCE:	0.00	**UNPAID CHEQUES:**	0

11. STAFFING AND SUSTAINABILITY

The BSFL innovation has been fully integrated into the activities and budget of the African Centre for Agroecology and Livelihood systems (ACALISE) funded by World Bank. The staff of the Centre and trained members of the Faculty of Agriculture shall continue to manage the innovation. More research is being carried out and training farmers and extension workers will go on so that as many people as possible, especially the women, the youth, and the vulnerable, benefit from this noble innovation.

Signed by

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Dr. Jude Ssebuwufu

Director ACALISE, Coordinator BSFL Project