IITA BBEST

BSF FOR BIO CIRCULAR ECONOMY AND ENVIRONMENTAL SUSTAINABILITY

Inside the Issue

MESSAGE FROM THE PROJECT MANAGER.

Dear partners and esteemed readers,

Welcome to the IITA BBEST Digest Volume 7, our first newsletter of the year. In this edition, we present to you an overview of the project's activities and key achievements over the past months in the different implementing countries.

As we continue to work together towards our common goal, I want to acknowledge your dedication and your hard work which have contributed immensely to this project's progress.

I am confident that with our collective efforts, we will achieve more milestones for the future.

Enjoy the read.

MAWUFE KOMI AGBODZAVU (Ph. D)

BBEST PROJECT COORDINATOR

IITA BBEST PROJECT AND INERA TRAIN VEGETABLE FARMERS ON ORGANIC FERTILIZER PRODUCTION.

As part of the implementation of the (BSF for Bio Circular Economy and Environmental Sustainability) IITA BBEST Project activities, funded by the Norwegian Agency for Development Cooperation (Norad), the International Institute of Tropical Agriculture (IITA) in partnership with the National Institute for Agronomic Study and Research (INERA) organized a practical training workshop for 50 people made up of 24 men and 26 women on January 6, 2025, at the University of Kinshasa (UNIKIN). The aim of this workshop was to equip agripreneurs with knowledge on the production of the Black Soldier Fly residue (frass), an organic fertilizer.

The workshop which was structured in two parts focused on the rearing of the black soldier fly (BSF), with a general overview of its origin and some fundamental characteristics that make it a good candidate for rearing without risk for humans and animals. These characteristics are the expansion of the species throughout the intertropical zone despite its American origin, its rich content in proteins and lipids making it an extremely interesting alternative source of protein, used in feed formulation for different livestock sectors (chickens, fish and pigs) and its harmlessness to humans.

The facilitators highlighted the use of the BSF larvae in animal feed formulation and its frass in vegetable as an innovative and sustainable solution offering farmers an effective way to reduce costs while increasing their productivity.

Also, the integration of black soldier fly larvae and organic fertilizer into agriculture helps to preserve the environment.

The participants visited the black soldier fly larvae production unit to sight the different stages of the fly's rearing starting with the collection of waste to obtaining the fly, the collection of eggs, pre-pupae and pupae.
The second part of the workshop focused on training the participants on the use of organic fertilizer from the larvae of the black soldier fly. It was mentioned that the residues obtained after the digestion of organic matter by the larvae constitute a rich fertilizer and can be used after composting as an organic amendment to fertilize crops.

It was recalled that organic fertilizer makes it possible to grow healthier vegetables and reduce the ecological footprint. Participants were advised to opt for these agroecological practices to ensure sustainable management of their resources, by reducing chemical inputs. The participants visited the experimental field at Kinshasa where the black soldier fly larvae organic fertilizer is used to fertilize the plants.
Eight members among the IITA BBEST Project beneficiaries in Kinshasa participated in this workshop with the aim of increasing their knowledge, namely two members of the Agricultural Cooperative of the Center of Kimbanseke (COOPACEK), two members of the Agricultural Cooperative of the Center Maraicher of N'djili (COOPACEN), two members of the Association of Fish Farmers for Development in Congo (APIDEC) and two members of the Judith farm.
At the end of the training, participants were presented a certificate each.

Vegetable farmers trained by IITA BBEST Project and INERA on the BSF frass in Kinshasa.

MALI: PROMOTING THE BSF LARVAE AMONG FISH PRODUCERS

As part of the promotion and the demand creation of the Black Soldier Fly Larvae, an alternative source of protein among fish producers, the IITA BBEST Project took part in a conference-debate during the Fish Days held from 09 to 11 January 2025 in Bamako.
Through their participation, the team noticed the interest of different sectors especially students of agro-pastoral schools in the BSF technology. The project team gave valuable information on the BSF technology to participants.
During the two-days event, there were exhibitions, sales of products related to the fish farming, as well as conference-debate sessions.

The BBEST Project Team presented to the public, government officials and stakeholders the BSF Technology, explained its life cycle. The team showcased the larvae used in chicken, fish and pig feed formulation and, the frass, used as organic fertilizer for vegetable production. It also stressed on the other benefits of the BSF technology such as urban sanitation and its ability to create jobs.

On the Second day, the Project team took part in the conference-debate to further enlighten the public on the technology. This was done through a presentation on the impact of BSF larvae on fish development.

It was a great experience, a discovery of a new technology for most of the visitors but above all an opportunity to meet producers and potential BSF entrepreneurs.

Visitors the BSF technology and its products at the IITA BBEST Project's stand during the Fish Days

THE BLACK SOLDIER FLY LARVAE PRODUCTION UNIT: A REFERENCE CENTER IN NIAMEY

Students from the Islamic University in Niamey visited the BSF central Unit established by The IITA BBEST Project and its partner INRAN with funding from Norad - Norwegian Agency for Development Cooperation. This was a fruitful visit as the students had an enriching experience.

During their visit, the students gathered extensive knowledge on the rearing process of the black soldier flies, and the temperature conditions needed for a successful rearing. Furthermore, the technicians provided them with information on the dried black soldier fly larvae, an alternative source of protein used in the formulation of chicken fish and pig feed and the frass used in the production of vegetables.

The central unit which is set to be a production and a commercial unit for the BSF larvae and frass is positioning itself to become an information and training center for visitors, especially students and agripreneurs.

Students from the Islamic University sighting the Black Soldier Flies and the larvae during their visit to the BSF production unit in Niamey.

IITA AND AALI PRESENT THE BLACK SOLDIER FLY PROJECT TO THE ACTING GOVERNOR

On November 19, 2024, the Vice-Governor and Acting Governor received a delegation from the African Agricultural Leadership Institute (AALI), and the International Institute of Tropical Agriculture. The objective of this meeting was to present an innovative project aimed at improving sanitation in the city of Bukavu while boosting the livestock sector.

At the heart of this revolutionary project is the black soldier fly. This insect, raised from organic waste, is proving to be a real resource for agriculture. Its larvae, rich in protein, are a food of choice for poultry, fish and livestock, thus improving the nutritional quality of livestock products.

"***We are still at the beginning of the experiment, but the results are promising***," says Professor David Bugeme Mugisho, Technical Director and Country Advisor of AALI and head of the delegation.

"***Within a year, we plan to extend this project to several territories and villages, involving women market gardeners and young people. Our objective is to develop economic sectors around this insect, by creating added value throughout the chain***." He pointed out.

The Acting Governor welcomed this project and expressed the support of the provincial government led by Professor Jean-Jacques PURUSI SADIKI, which has made the improvement of agriculture and livestock one of its priorities.

IITA and AALI visit the Governor of South Kivu.

" ***We are confident that this initiative will revolutionize agriculture in our province. We will support AALI and its partners in the implementation of this project, which is perfectly in line with our sustainable development policy. We encourage you to work closely with the Ministry of Agriculture, Fisheries and Livestock, as well as the City of Bukavu and the municipalities in charge of urban waste management.*** »

The Black Soldier Fly project comes at the right time for South Kivu because, a few weeks ago, the Provincial Governor had launched a project called Clean Bukavu, which aims to clean up the city of Bukavu.

CREATING DEMAND FOR THE BSF DRIED LARVAE AMONG POULTRY PRODUCERS AT THE SIVAM

The IITA BBEST Project in collaboration with the Institute of Rural Economy (IER) participated in the first edition of the International Poultry Fair of Mali (SIVAM) to create demand for the Dried BSF larvae, a product of the BSF technology and promote the technology for its various benefits namely environmental sanitation, production of proteins for livestock and organic fertilizer for vegetable production.

The event had more than 15 countries from Africa and Europe with more than 200 stands under the patronage of the Minister of State, in charge of territorial administration and local authorities.
The objective of SIVAM is to bring together stakeholders and create a space for exchange, know-how and advocacy to mobilize investors to boost Mali's poultry sector.
The theme of this first edition is: "Poultry sector, a factor in strengthening sovereignty and food and nutritional security".

Mali has more than 60 million poultry and the poultry sector is strategic in terms of job creation and source of income. Its turnover is 78 billion CFA francs, and it offers 117460 direct and indirect jobs.

The poultry sector is committed to improving the consumption of chicken meat by 3 to 10 kg per person per year and eggs by 59 to 100 eggs per person per year. Three panels were led during the exhibition: Panel 1 "Prospects for the development of poultry farming in Africa" moderated by the group of international experts. Panel 2 "Financing prospects for the poultry sector", moderated by the National Bank Group. Panel 3 "Role

Visit of the participants to the BSF stand during the SIVAM

of the poultry sector in sovereignty, food and nutrition security."

It was a perfect opportunity for the IITA BBEST Project in Mali to promote the novel the black soldier fly technology and its dried larvae used in animal feeding. The team offered training on the production techniques of black soldier fly larvae. Through this exhibition, the project team awaken the interest of poultry feed producers and traders in the larvae of the black soldier fly.

Visit of participants at the BSF stand during the SIVAM

THE IITA BBEST PROJECT INTRODUCED ITS DRIED BSF LARVAE TO THE GSA.

The IITA BBEST Project takes a significant step towards the certification and the commercialization of its products: the dried Black Soldier Fly larvae and its organic fertilizer. In a formal meeting, the International Institute of Tropical Agriculture (IITA), and The Biotechnology and Nuclear Agriculture Research Institute (BNARI) discussed the certification modalities with the Ghana Standard Authority (GSA).

The IITA BBEST project team, led by Dr Richard Asare, IITA Country Representative and Prof Michael Osae, the director BNARI one of the national research partners of the project introduced the BBEST project and its two products namely the Dried BSF larvae, an alternative source of protein used in formulating feed for the chicken, fish and pig and the BSF Frass, an organic fertilizer used in vegetable production to the Director General of the Ghana Standard Authority (GSA).

Prof Dodoo, Prof Michael Osae, Dr Richard Asare and the BBEST team.

The team gave an overview of the project, whose overall objective is to improve the livelihood of

smallholder chicken, fish, pig and vegetable producers and other value chain actors and contribute to urban sanitation and climate change mitigation.

They shared key achievements of the project in Ghana which are among other things the establishment of the BSF Central Unit in Kofisah for the mass production and commercialization of the dried BSF larvae and organic fertilizer, and the establishment of the Decentralized units for selected farmers for the production of the BSF dried larvae and organic fertilizer. The two institutions had a fruitful discussion with Prof Dodoo and gathered the information needed to start the procedures for the certification for the dried BSF larvae.

The project has already taken a step ahead by developing the standard for the dried BSF larvae: GS 1382:2023 - ANIMAL FEEDING STUFF – SPECIFICATION FOR DRIED INSECT PRODUCTS FOR COMPOUNDED ANIMAL FEED at the early stage of the project, which was one of the important aspects of the requirements needed was the standard of the dried BSF larvae.

IITA BBEST PROJECT HOLDS ITS ANNUAL REVIEW AND PLANNING MEETING IN ACCRA, GHANA

During its annual review and planning meeting held in Accra, IITA received the support from the Government of Ghana through the Ministry of Food and Agriculture (MOFA) to foster an enabling environment for the implementation of its BSF for Bio Circular Economy and Environmental Sustainability (BBEST) Project, an environmentally- friendly project which addresses the issue of urban waste management and unsustainable agricultural outputs for poultry and vegetable producers.

The meeting which was held from 24th to 28th February brought together key stakeholders such as the MOFA, Norad, the Royal Norwegian Embassy, national and international partners working with the BBEST project namely: BNARI, CSIR-IIR AALI, INERA, UNIKIN, IER, WORLDVEG, INRAN, NIBIO and IMR.

In his address, Dr Mawufe Agbodzavu, the Project Manager gave the purpose of the meeting which are "to review the project's achievements over the past year and exchange ideas on improving its collaborative impact and strengthen networking and cross-country learning".

Group pictures of participants at the Annual review and planning meeting in Accra

Madam Vivian Hilde Opsvik, the Counsellor for Food Security and Climate, representing the Royal Norwegian Embassy and Norad congratulated IITA and partners for developing an innovative project that addresses the need for sustainable protein source and enhances organic waste utilization to create a circular system. She said "the Black Soldier Flies larvae were a high protein feed option for poultry, and aquaculture production offering a sustainable and cost-effective alternative to traditional feed sources.

In her goodwill message, Prof Anna Lartey, the board member of IITA said a substantial amount of food is produced in Ghana was lost due to the inefficient supply chains, and the BSF technology was needed to address food insecurity. She called on the government and stakeholders to upscale the technology to farmers especially to youth and women farmers to get the maximum benefits from their work. On behalf of the IITA Board, she thanked the Norwegian Government for funding the project and making the innovation possible.

The BBEST project partners presented the results of the experiments conducted, an update on the mass-production of BSF larvae and frass was given, while they discussions were held on the challenges met by partners and lessons learned.
Together with the partners, the BBEST Project Management discussed research results that can be repackaged for practical and effective dissemination of the benefit of BSF larvae and the frass aiming to take the BSF technologies to scale and establish market demand.
An assessment was done on the engagement of policy makers in each country by examining the progress in developing and adopting standards for using BSF products in animal feed and vegetable production in participating countries. Finally, they discussed and agreed on the Project Implementation Plan, and review the Annual Indicator Targets for 2025.

The meeting provides the platform for participants to explore the progress made in Ghana namely, the production of BSF larvae and frass at the centralized unit established in Kofisah, the gazetting of the Dried BSF standard and the ongoing certification process for the sales of the BSF Products.

Visit of participants to the production unit of the BSF larvae and frass.

IITA BBEST DIGEST is a quarterly newsletter produced by the communication unit of the BBEST Project

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