



The SWIFT Team

Team members of SWIFT include Makerere University (Uganda), Bioconvision (Uganda), Mzuzu University (Malawi), Soil Food Healthy Communities (Malawi), Eclose (Switzerland) and Eawag (Switzerland).



Faces of SWIFT



Isaac Rubugumya

PhD student: Makerere University, Uganda

Isaac Rubugumya holds an MSc in Agricultural and Biosystems Engineering from Makerere University. Currently pursuing his PhD at Makerere, he is part of the SWIFT project where he works with black soldier flies (BSF), investigating the potential of the residue as a fertilizer to replace or substitute chemical fertilizers. To connect with Isaac on linkedin click the link on the photo.



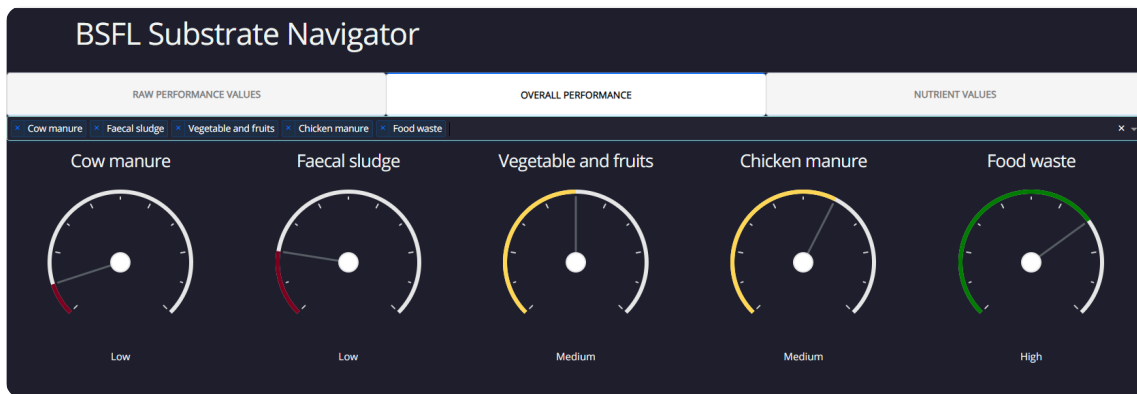
Rowland Watipaso Mhone

Project Manager: Soil Food and Healthy Communities (SFHC), Malawi

Rowland holds a Diploma in Agriculture from Mwimba College. He is part of the SWIFT project where he leads the BSF facility at SFHC and trains outgrower farmers on a more simplified approach. To connect with Rowland on linkedin click the link on the photo.

Latest news

New!



Try the BSFL Substrate Navigator

The BSFL Substrate Navigator is an interactive tool designed to help users identify organic waste substrates for the cultivation of black soldier fly larvae (BSFL). If you are interested and want to know how well BSFL grow on your substrate, check out the tool using the button below.

[Try the tool!](#)

Unlock insights into the tool! Learn about:

1. **Overall Performance Score:** Explore overall larval performance on various substrates (e.g., manure, food waste) based on average mean of indicators like larval weight, bioconversion rate, waste reduction, and survival rate.
2. **Raw Performance Values:** Analyze specific larval performance indicators on substrates, compare multiple substrates, and gain insights into variability, mean, median, and study by clicking on the bars.
3. **Nutrient Values:** Assess substrate nutrient composition, including protein, fat, carbohydrates, fiber, and moisture content.
4. **Menu Button:** Access statistical analysis details, contact info, and citation recommendations via the top-right menu button.

Upcoming Webinar !

join the conversation at www.wastewise.be @bewastewise #wastedialog



Revolutionizing waste: Organic treatment with Black Soldier Flies

January 29 2025; 1 PM UTC; Duration: 1.5 hrs



Piotr Barczak
African Circular Economy
Network Foundation (ACENF)

Dr. Daniela Peguero
Eawag

Mwangi Murigi
Nutrimzuri Farmcare

Yuvita Rakhman
PRO-BSF

[Register](#)

Join us **Jan 29 @ 14:00 CET** for an engaging webinar with our very own SWIFT team member, Daniela Peguero, as we explore the pivotal role of BSF in managing organic waste in advancing the circular economy by turning organic waste into valuable resources. Piotr Barczak, Circular Economy Program Manager at ACEN Foundation, explores the BSF role in waste management with researchers and practitioners.

Discover Our Work in Malawi

SWIFT Midterm Workshop Event

In Nov 2024, partners from Uganda, Malawi, and Switzerland came together in Mzuzu, Malawi, for a midterm meeting workshop to share and discuss the progress and findings since the project's inception. We met with local authorities from Mzuzu and smallholder farmers to discuss how BSF can be used to manage waste and create livelihood. Learn more below about some of the activities we did.



Visiting Dzaleka Refugee camp

During our visit to the Dzaleka refugee camp, supported by UNHCR, we explored the use of Black Soldier Fly Larvae (BSFL) as an innovative approach to managing and treating the organic waste generated within the camp.



Meeting Outgrowers

As part of SWIFT, we are currently working with nine smallholder farmers in Malawi who have livestock and training them on BSF. Our outgrower farmers have expressed interest in establishing their own reproduction unit and have successfully constructed their initial housing for the flies with one net full of flies. This initiative will soon expand to include five nets as part of our new method known as SIMBA. More on the SIMBA approach will come in a later newsletter.



Training students at Mzuzu University

Here you can see Gift Chawanda, a team member of SWIFT, educating students from the Agri-Science department at Mzuzu University about black soldier fly, and demonstrating its processes and benefits. He provides insights into its ability to transform waste into nutrient-rich larvae, high in protein and fat, suitable for livestock feed. The larvae in this case are grown using food waste from the university canteen.

Black soldiers fly more fish

CLIFF KAWANGA
CONTRIBUTOR

Amid a growing waste crisis, Dr Frank Mnthambala is taking a groundbreaking initiative that could transform agriculture and waste management in Malawi.

At the Mzuzu University (MzU), Department of Agri-Science, he works with black soldier flies (BSF) to show how the insects can drive sustainable change by converting waste into valuable resources.

Collectively, BSF, scientifically known as *Hermetia illucens*, is gaining attention for its wide range of potential applications, including waste management, animal feed and medicinal properties.

Black soldier flies have many uses, but our current focus is on producing animal feed," says the scientist. "The larvae provide an environmentally friendly, sustainable protein source for aquaculture, poultry and livestock, reducing the dependence on traditional feed sources like fishmeal and soy."

Mnthambala is working closely with the Sustainable Waste-Based Insect Farming Technology (SWIFT) Project to showcase the fly's transformative potential in Malawi.



Mnthambala (R) is leading a BSF study to churn out fish feed from waste.

The project is a joint initiative led by the Solid Waste in the Department of Sanitation, Water and Solid Waste for Development (SWSWD) and the Swiss Federal Institute of Aquatic Science and Technology (Eawag). The initiative collaborates with researchers from Mzuzu and the Soil, Food and Health Communities (SFHC) in Malawi and Uganda's Makerere University and Bioconvision.

MzU's Department of Agri-Science initiated a BSF facility as an exploratory project, which has since developed into a fully integrated operation.

"Our facility now manages the entire lifecycle of black soldier flies—from eggs to larvae, pupae and adults in a specialised greenhouse facility," Mnthambala says.

This facility efficiently produces the larvae. The worms consume a high-protein feed for poultry, pigs and fish using a simplified BSF approach (SMBM).

The BSF facility produces frass, a nutrient-rich organic fertilizer, by utilizing organic waste from MzU's restaurant. This project showcases a sustainable, closed-loop system that improves both agricultural productivity and educational outcomes within the university.

Swift plans to expand with a larger facility in Mzuzu City, the Northern Region's commercial hub. "This project will scale up our capacity to process larger volumes of organic waste. It's not just about increasing operations; it's a step towards realising our broader vision of improving food security, reducing waste, and promoting sustainable agricultural practices across the region," he says.

The project was developed in response to the escalating food insecurity and rapid population growth across sub-Saharan Africa.

"High feed costs are a significant barrier for Malawi's growing poultry, pig and fish farming sectors," said Mnthambala. "In addition, systemic challenges such as limited access to land, finance and infrastructure disproportionately affect women and youth, restricting their ability to contribute to the economy."

By converting organic waste into valuable resources, the project aims to replace harmful waste disposal methods like dumping and open burning, which pose environmental and health risks and contribute to greenhouse gas emissions.

"This waste-to-resource approach is still in its early stages in Malawi, but it offers a promising solution. Our goal is to encourage smallholder

farmers and small to medium-sized enterprises to adopt this innovative model, improving food security and creating jobs," he says.

The Department of Agri-Science is committed to fostering human capital development, empowering entrepreneurs, and contributing to sustainable agricultural progress in Malawi.

"We are passionate about transforming Malawi's agricultural sector into one of the most thriving in Africa," Mnthambala says.

The majority of fish farmers in the country cannot afford fish feed, which accounts for 60 percent of the cost of the enterprise.

Smallholder farmers bought over 800,000 for a 50 kilogramme bag since all microorganisms are imported.

The price tag compelled government to remove value-added tax on fish feed and importation of aquatic machinery in 2021, allowing smallholder farmers to buy more than 15,000 tonnes of the feed that produces about 3,600 tonnes of fish annually.

"The spike of fish feed has been low due to high prices. As such, the country imports around 900 tonnes of fish feed per annum, which is not economically sustainable for local farmers," said Professor Estomaruwa.

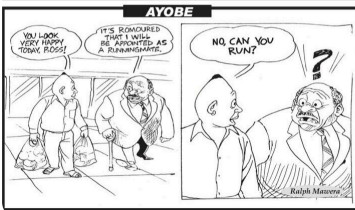
Professor Estomaruwa is Malawi's director for Africa Centre of Excellence in Aquaculture, following the fish farming scheme in Chiapa says fish yields remain low because many farmers cannot lay their hands on improved fish feed.

"We cannot afford both imported and locally produced feed. This compromises fish growth and the harvest from our ponds," he said.

If successful, the black soldier fly turning waste into fish and animal feed offers a new option for constrained farmers while reducing waste clogging the face of Malawi. ■

News Feature!

We're thrilled to share that our amazing SWIFT team member, Dr. Frank Mnthambala from Mzuzu University, was featured in the local newspaper! He attended the agricultural trade fair held in Blantyre to present BSF and even had the honor of showcasing BSF to the President of Malawi.



Explore Our Work in Uganda

Meet Bioconvision



Discover our BSF facility, Bioconvision, located in Jinja, Uganda. We're transforming 1 ton of organic waste daily and are on track to scale up to an impressive 10-15 tons per day by 2025. Join us on this exciting journey towards a sustainable future! Click on the icon to see the video.



Maize trials with BSFL residue

Isaac is leading exciting maize trials located at the Makerere University Agricultural Research Institute Kabanyolo in Gayaza. He's exploring the impact of BSFL residue versus chemical fertilizers and the combination of chemical mixed with BSFL residue at different application rates. Here, you can see him in action, measuring the plant's height using the BSFL residue from Bioconvision. Further findings to come!

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*In every piece of waste
lies an opportunity to
create something
valuable.*



”

-Anonymous

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<https://forms.gle/qoCU3xWeQ9mKWa176>.



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