



BIOBASED INNOVATION AND ENTREPRENEURSHIP BOOTCAMP (BIEB)

Making Ideas Investable

13 – 24 July 2026

icipe Duduville Campus
Nairobi, Kenya

Organised by:
BioInnovate Africa

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Background

The Biobased Innovation and Entrepreneurship bootcamp (BIEB) is organised to enable participants to package their innovative biobased ideas into investable projects. It offers practical hands-on workshops, cocreation of ideas and real-world exposure to commercial biobased industries and regional policy instruments relevant to translate biobased research into value-added goods and services. The Bootcamp is designed to foster collaboration and expose participants to the triple helix model of innovation involving academia, industry and policy actors as important elements of a functional innovation system.

Participants

The participants (bootcampers) are competitively selected from the BioInnovate Africa network of universities and research organisations.

Pitches

A Pitch Event scheduled on the final day showcases the innovative biobased ideas packaged as projects or ventures to an audience of experts, potential investors and funders. The half-day event features 5-minute pitch presentations with feedback, Q & A and networking.

Partners

Experts in various fields such as funding and investment, intellectual property, policy regulation and enterprise development provide the guidance and mentorship. In addition, collaborations with the East African Community (EAC), academic institutions such as the Nelson Mandela African Institution of Science and Technology (NM-AIST), private companies such as A-to-Z Group, Envsol Technology Limited, among others, give the bootcampers a bird's view of innovations driving bioeconomy development in East Africa.

Programme

Day 1 – Stage setting, customer discovery and propositioning value
Day 2 – Go-to-market strategy and navigating regulatory hurdles
Day 3 – A day's practicum
Day 4 – Basic financials and navigating intellectual property options
Day 5 – One-on-one with investors and pitch preparation
Day 7 & Day 8 – Field visits
Day 10 – Pitch event

Products

A. Biofertilisers

1. RutubaTech

Product description: An activated phosphate fertiliser made from Tanzania's indigenous rock phosphate and industrial sugar by-products using proprietary nutrient activation technology. Designed for commercial sugarcane estates and large-scale farmers, it improves phosphorus availability, enhances crop uptake, reduces reliance on imported fertilisers, and supports long-term soil productivity.

Name of idea bearer: Damiano Raphael Kwaslema

Organisation of affiliation: Sokoine University of Agriculture

Country: Tanzania



Bio: Damiano is a Ph.D. candidate and Assistant Lecturer in the department of soil and geological sciences at Sokoine University of Agriculture (SUA), Tanzania, where he conducts research on sustainable soil fertility and biobased agricultural innovations. Motivated by the need to reduce Tanzania's dependence on imported fertilisers and improve soil productivity, his doctoral research focuses on developing a nano-enhanced phosphatic biofertiliser that combines Minjingu rock phosphate, phosphate-solubilising bacteria, and molasses to provide an affordable, locally produced phosphorus source for smallholder farmers. His work integrates soil microbiology, nanotechnology, and agronomy to address phosphorus deficiency in agricultural soils while supporting sustainable agricultural production. A World Wildlife Fund (WWF) Russell E. Train Fellow, Damiano is also an active researcher and consultant in soil science, with a strong interest in translating scientific research into practical agribusiness solutions that improve smallholder livelihoods.

2. SoyaBiofertiliser

Product description: A rhizobia-based biofertiliser designed for tropical soils to improve soybean productivity. It enhances nitrogen availability, increases yields, reduces reliance on chemical fertilisers, and supports the production of high-quality, export-ready soybean crops.

Name of idea bearer: Monica Daniel Nakei

Organisation of affiliation: Sokoine University of Agriculture

Country: Tanzania



Bio: Monica is a Senior Agricultural Researcher and consultant in Sustainable Agriculture at Sokoine University of Agriculture (SUA), Tanzania, where she conducts research on soil health and sustainable farming systems. Her work focuses on developing bio-based agricultural solutions, including biofertilisers, biopesticides, and agroecological technologies that improve crop productivity while restoring soil health. Motivated by the need to provide affordable and environmentally friendly solutions for farmers, she developed a biofertiliser specifically designed to increase soybean (*Glycine max*) productivity. She has also led research on plastic biodegradation, legume production through biofertiliser technologies, soil fertility management, and ecosystem-based approaches to sustainable agriculture. She holds a Ph.D. in Life Sciences, specialising in Sustainable Agriculture.

Products

3. Fahari Fertiliser

Product description: A seaweed-based granulated organic fertiliser enriched with essential macro- and micronutrients and phytohormones. Designed for farmers, it improves soil fertility, enhances nutrient availability, increases crop yields, and transforms underutilised seaweed into a sustainable agricultural input.

Name of idea bearer: Shengelo Edward Manga

Organisation of affiliation: Nelson Mandela African Institution of Science and Technology

Country: Tanzania



Bio: Sengelo is a Master of Science student in Sustainable Agriculture at the Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania, and works with the National Agricultural Extension Services Agency (NAESA). Her work focuses on sustainable agriculture, agricultural extension, and applied innovations that improve soil fertility and crop productivity. Through her engagement with farmers and agribusiness enterprises, she promotes improved agronomic practices, sustainable land management, and climate-resilient agriculture to enhance agricultural productivity and resilience. She holds a Bachelor of Science degree in Horticulture from Sokoine University of Agriculture (SUA) and has expertise in agricultural systems management.

B. Food/Feed

4. Nutri Bar

Product description: A nutritious snack bar made from peanuts, soybeans, maize, oyster mushrooms, and honey. Designed for health-conscious consumers, it provides sustained energy, supports focus and productivity, and offers a convenient alternative to highly processed snacks.

Name of idea bearer: Joyce Eka Nshombo

Organisation of affiliation: Université Évangélique en Afrique

Country: Democratic Republic of the Congo



Bio: Joyce is a food scientist specialising in nutrition and food quality control at Université Évangélique en Afrique (UEA), Democratic Republic of the Congo (DRC), where she serves as a teaching and research assistant and conducts practical training in the Food Processing Unit. Her research focuses on improving food quality and safety to protect consumer health. Motivated by the need to ensure the safety of staple foods, her master's research assessed the quality and safety of cassava flours marketed in South Kivu, contributing to efforts to strengthen food safety and public health. She holds an Advanced Master's degree in Nutrition and Food Quality Control from UEA.

Products

5. VitaJoy Instant Drink

Product description: A fruit drink made from indigenous Ugandan wild berries. Designed for young children, it provides essential vitamins and antioxidants that support healthy growth, stronger immunity, improved eyesight, and better nutrition.

Name of idea bearer: Ribon Okot Musoga

Organisation of affiliation: Centre for Food and Adequate Living Rights

Country: Uganda



Bio: Ribon is a Nutritionist and Researcher at the Centre for Food and Adequate Living Rights (CEFROHT), Uganda, where he provides technical leadership on nutrition and food policy. His work focuses on advancing nutrition-sensitive innovations, sustainable food systems, and evidence-based policies that improve public health and strengthen the right to adequate food. Motivated by the need to address micronutrient deficiencies and reduce postharvest losses, he is developing bio-based functional beverages from indigenous wild fruits to enhance nutrition while creating sustainable livelihood opportunities for rural communities. He is currently pursuing a Master of Science in Applied Human Nutrition at Makerere University and holds a bachelor's degree in human nutrition.

6. Royal Tej Kit

Product description: A ready-to-use starter culture made from indigenous microorganisms for the safe, consistent, and scalable production of traditional and alcohol-free Tej. Designed for small- and medium-scale producers, it improves product quality, reduces batch failures, and supports business growth while preserving authentic flavour.

Name of idea bearer: Tigist Getachew Tadesse

Organisation of affiliation: Bio and Emerging Technology Institute

Country: Ethiopia



Bio: Tigist is a Researcher at the Bio and Emerging Technology Institute in Addis Ababa, Ethiopia, where she develops biotechnology solutions to improve food safety, health, and sustainable production. Her work focuses on modernising indigenous Ethiopian fermented foods and beverages through the development of probiotics, starter cultures, bio-inoculants, and novel antibacterial products. Motivated by the need to harness beneficial microorganisms and traditional knowledge for improved public health, she conducts research on the genomic and functional characterisation of beneficial microbes, the safety and quality of fermented foods and beverages, and the scientific validation of medicinal plants as sources of antimicrobial compounds. She holds a Ph.D. in Applied Microbiology from Addis Ababa University.

Products

7. Vol-Binder Plus

Product description: A low-cost natural feed additive made from volcanic clay and plant-based organic ash. Designed for smallholder livestock farmers, it protects animals from harmful mycotoxins in cereal-based feeds, improves productivity, and reduces farm losses with easy-to-use, livestock-specific formulations.

Name of idea bearer: Ally Baholela Ally

Organisation of affiliation: Sokoine University of Agriculture

Country: Tanzania,



Bio: Ally is a veterinarian, academician, and early-career researcher at the department of veterinary anatomy and pathology, Sokoine University of Agriculture (SUA), where he contributes to research on animal health and biobased veterinary innovations. His work focuses on developing alternative therapeutics for inflammatory diseases by applying knowledge of microanatomy, cell communication, and animal disease models. Motivated by the need to address antimicrobial resistance (AMR), he is evaluating the therapeutic potential of nano-formulated *Commiphora swynnertonii* resin as an alternative treatment for bovine mastitis. Funded by the International Development Research Centre (IDRC) under the Nano-COMMI Project, this research forms part of his Master of Science in Veterinary Anatomy at SUA.

8. KALPRO

Product description: A natural probiotic feed supplement that improves gut health, enhances immunity, and increases feed efficiency in livestock and poultry. Designed for farmers, it supports healthier animals, reduces antibiotic use, boosts meat, milk, and egg production, and improves farm profitability.

Name of idea bearer: George Lugonzo Odongo

Organisation of affiliation: Kenya Agricultural and Livestock Research Organization

Country: Kenya



Bio: George is a One Health Specialist at the Kenya Agricultural and Livestock Research Organization (KALRO), Kenya, where he develops science-based solutions that improve livestock health, productivity, and food security. His work focuses on animal health, epidemiology, antimicrobial resistance, and digital technologies for disease surveillance and control. Motivated by the need to reduce antibiotic use while improving livestock productivity, he developed KALPRO, an indigenous probiotic that enhances feed digestibility, strengthens animal immunity, reduces methane emissions, and improves meat, milk, and egg production. He has also contributed to innovative technologies including Vetguard, a livestock disease reporting and surveillance tool; AfriTrace smart ear tags; and BISMART, a disease intelligence system. He holds a bachelor's degree in Microbiology and Biotechnology, a Master's degree in Medical Microbiology, and a Master's degree in Veterinary Virology.

Products

9. FunzaBoost

Product description: A biobased substrate conditioner that transforms salty sisal waste into a high-quality feed substrate for Black Soldier Fly production. Designed for BSF farmers, it reduces salinity, optimizes pH, improves nutrient availability, and supports the production of nutritious larvae.

Name of idea bearer: Asha Mohamed Shuli

Organisation of affiliation: Nelson Mandela African Institution of Science and Technology

Country: Tanzania



Bio: Asha is a Tutorial Assistant and a Master of Science student in Environmental Science and Engineering at the Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania, where she conducts research on sustainable biobased solutions for agricultural and industrial waste management. Motivated by the need to transform agricultural waste into valuable resources, her research focuses on using beneficial local microorganisms to reduce salt in sisal waste, enabling its conversion into feed for Black Soldier Fly rearing, animal protein feed, and organic fertiliser. Through this work, she aims to advance waste valorisation, support the circular bioeconomy, and create practical, environmentally friendly solutions that benefit farmers and industries. She holds a Bachelor of Science degree in Molecular Biology and Biotechnology.

C. Biopharmaceuticals

10. Hive Gold – Healing Propolis Cream

Product description: A 100% natural, chemical-free healing cream made from pure propolis and beeswax. Designed for beekeepers, families, and health-conscious consumers, it soothes stings, promotes wound healing, helps prevent infections, and provides an affordable, gentle alternative to conventional treatments.

Name of idea bearer: Uwimana Ange Belyssa

Organisation of affiliation: University of Burundi

Country: Burundi



Bio: Uwimana is a Master of Science student in Environmental Science and Integrated Management at the University of Burundi. Her work focuses on sustainable beekeeping, the development of naturally biobased products from hive products, and the sustainable management of natural resources. Motivated by the potential of beekeeping to improve livelihoods and promote environmental sustainability, she has worked on an Académie de Recherche et d'Enseignement Supérieur (ARES) funded project supporting women beekeepers in Burundi and manages her own apiary. Through her work, she promotes the value addition of honey, propolis, and beeswax into innovative biobased products that support bio-entrepreneurship and the circular bioeconomy. She holds a Bachelor's degree in Biological Sciences.

Products

11. Bubble Sparkle™ Kids' Soap

Product description: A child-friendly soap that combines naturally derived ingredients with playful, behaviour-centred design to make handwashing enjoyable and habit-forming. Designed for children, families, schools, and health programmes, it promotes better hygiene and helps reduce preventable infections.

Name of idea bearer: Achсах Geremew

Organisation of affiliation: Addis Ababa University

Country: Ethiopia



Bio: Achсах is a Master of Science student in Applied Microbiology at Addis Ababa University, Ethiopia, where her research focuses on antimicrobial resistance (AMR) in pharmaceutical manufacturing industries. Through her work, she recognised that preventing infections before they occur is one of the most effective and sustainable ways to improve public health and combat antimicrobial resistance, particularly in low-resource settings. This insight inspired her to develop Bubble Sparkle Kids' BioSoap, a biobased innovation designed to help children build lifelong handwashing habits while promoting infection prevention, responsible antibiotic use, and the circular bioeconomy. Her research and innovation interests lie at the intersection of microbiology, public health, behaviour-centred design, and sustainable biobased product development, with a focus on developing practical, evidence-based solutions that encourage positive health behaviours. She holds a Bachelor's degree in Biology and aspires to create scalable bioinnovations that bridge science, behavioural insights, and creative design to strengthen infection prevention and improve public health in Africa.

D. Industrial Biobased Chemicals

12. AmbiZyme

Product description: A refrigeration-free enzyme solution that delivers highly stable, locally produced cellular reagents for molecular laboratories. Designed for research and diagnostic labs, it eliminates the need for cold storage, reduces dependence on imported enzymes, and improves reliable, affordable access to essential laboratory reagents.

Name of idea bearer: Yordanos Ali Hassen

Organisation of affiliation: Addis Ababa University

Country: Ethiopia



Bio: Yordanos Ali is a Ph.D. candidate at the institute of biotechnology, Addis Ababa University, Ethiopia, where she conducts research on biotechnology solutions for sustainable industrial applications. Her work focuses on recombinant protein expression, enzyme technology, self-regulating biomanufacturing platforms, and green industrial chemistry. Motivated by the need to strengthen regional technological sovereignty and the bioeconomy, she is developing sustainable, locally driven biotechnology solutions that translate laboratory innovations into accessible, high-impact industrial applications for resource-limited settings. She holds a Master's degree in Biotechnology.

Products

13. B-ECO1

Product description: A locally produced cellulase enzyme made from Uganda's municipal and agricultural organic waste. Designed for use as a biocatalyst and ingredient in industrial biobased manufacturing processes. It improves production efficiency and supports cleaner, waste-based manufacturing.

Name of idea bearer: Jarisa Ivan

Organisation of affiliation: Makerere University

Country: Uganda



Bio: Jarisa is a Master of Science student in Biochemistry at Makerere University, Uganda, where he conducts research on sustainable biotechnology solutions that transform locally available resources into high-value products. Motivated by the need to reduce organic waste while supporting green industries, he developed B-ECO1, a cellulase biocatalyst produced from Uganda's organic municipal waste. His work focuses on advancing industrial biotechnology, enzyme technology, and microbial fermentation to create affordable, locally produced alternatives for industries that process plant-based materials while promoting bioremediation and the circular bioeconomy.

Coaches

1. Linda Mathenge – Growth Africa, Kenya
2. Robert Karanja – BioLinx Africa, Kenya
3. Benjamin Mwanza – Villgro Africa, Kenya
4. Julius Ecuru – *icipe*, Kenya
5. Faith Amatika – *icipe*, Kenya
6. Shira B. Mukiibi – *icipe*, Kenya

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