



THE OASIS NEWSLETTER

A Publication from the Office of the Vice-Chancellor



JOOUST INSEFOODS team together with the University Management Board and invited Departmental heads, during the meeting held in Kisumu

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JOOUST INSEFOODS CHARTS A ROAD MAP FOR SUSTAINABILITY PLAN



JOOUST INSEFOODS team together with the University Management Board and invited Departmental heads, during the meeting held in Kisumu

Jaramogi Oginga Odinga University of Science and Technology (JOOUST) Africa Center of Excellence in Sustainable Use of Insects for Food and Feeds (INSEFOODS) Centre Advisory Board held a meeting to chart a road map for the sustainability of the project whose life cycle comes to an end in December 2023.

The Advisory Board which is chaired by the Ag. Deputy Vice-Chancellor, Academic, Student Affairs and Research, Prof. Denis Ochuodho, while commenting on the project noted that the project has put the institution on the world map. He added that it had taken keen

initiative and concerted efforts from stakeholders to ensure that the project meets its objectives.” This project has a huge potential to create an impact in both the community and the global space.” Said Professor Ochuodho.

The Project has been lauded as a launch pad for other projects to propel JOOUST to the global arena. Present during the meeting was the Deputy Vice-Chancellor, Planning, Administration and Finance, Professor Aggrey Thuo, who reiterated that the INSEFOODS project had propelled JOOUST to a higher league on the international arena. The Centre Director,

Professor. Darius Andika, took the members through the project achievements so far, namely: the development of a biodiversity repository of insects for food and feeds in the region, and building sustainable local, regional and international partnerships and networks for research, development and training of insects including the commercialization and KEBS approval of the cricket biscuits. “JOOUST has been able to sign an agreement with the Food and Agricultural Organization (FAO) to support the inclusive commercialization of the production of Black Soldier Fly Larvae (BSFL) for the livestock feeds industry” he proudly added.

The World Bank-funded INSEFOODS project which was officially launched in October 2016 is set to close at the end of December 2023.



The participants listen to the project's roadmap towards culmination

CONSTRUCTION OF WALKWAY AND PODIUM FOR THE EDDY COVARIANCE FLUX TOWER UNDERWAY

Jaramogi Oginga Odinga University of Science and Technology VLIR Sub-project 1 on Management of the Lake Victoria Basin Natural Resources headed by Prof. Julius Manyala, is involved in the construction of a walkway and a podium for installation of Eddy covariance flux tower at Maduwa primary school in Bunyala south, Budalangi constituency.

The school is within the lower catchment of River Yala, about 10 km from Osieko beach, and is only accessible via motorized boat transport. In the first week of August 2023, the sub-project involved the local community in the transportation of construction materials and the opening up of a 70m thick papyrus plantation to open waters for construction of the floating walkway and podium.

The Eddy covariance is a state-of-the-art instrument which has been acquired through partnership with the Flemish based VLIR-IOUS. The Eddy covariance flux tower is a micro-meteorological method which continuously

measures vertical concentration gradients of gases such as carbon dioxide, methane and nitrous oxide between the biosphere and the atmosphere. It can also measure and calculate vertical turbulent fluxes within atmospheric boundary layers. The equipment is expected to be installed in September 2023.



Site clearing in progress.



Transportation of construction material to the site.

THE JOURNEY OF A THOUSAND MILES!



Lilian enjoys a beautiful scenery outdoor while in Belgium

The Chinese sage of old, Lao Tzu, quipped that “the journey of a thousand miles begins with a step.” This sentiment cannot be truer for Lilian Wanyonyi, a beneficiary of JOOUST-VLIR IUC scholarship pursuing a Doctor of Philosophy in Applied Economics at the University of Antwerp, Faculty of Business and Economics, Envcon Research Group. Lilian was a Tutorial Fellow in the School of Business and Economics at Jaramogi Oginga Odinga University of Science and Technology before fortune smiled at her.

“It was a great honour to have been specially selected to embark on a life-changing journey of education and research” she admits. Wiping her seemingly chubby face with a white handkerchief, she adds “it is a couple of months now since I started the first phase of my research stay in Belgium. Moving in and settling in a new country, city, and of course in a new environment with new people has been amazing!”

Lilian says that the University of Antwerp is a world-class university with a credible QS World University ranking. The

university is cosmopolitan and boasts of students from diverse backgrounds, cultures and heritage. From its facilities and social amenities, the institution provides a serene environment that fosters a vibrant learning environment both inside and outside the classroom. To her, it is a home away from home environment for thousands of international students enrolled there. The university focuses on providing a broad foundation of knowledge across different fields to help students think critically and reason analytically.

Lilian reports that she has joined a vibrant and illustrious research team passionate about transformational and multidisciplinary research focusing on sustainable development. “I am under the mentorship of very inspiring, committed and experienced promoters who are sculpturing me into a change maker”, she gracefully says. She believes that their insightful guidance will greatly help in sprucing up her vision of helping communities around Lake Victoria Basin to develop climate change resiliency and have sustainable livelihoods.

From her current peers, she has learnt new and unique perspectives which have proved handy in firming her vision. “It has been fulfilling to learn and co-create ideas in a multicultural context and see the world through different lenses” she affirmed. To Lilian, having landed this scholarship has created a golden chance to use the intellectual opportunities available in Belgium, to think critically about big global challenges facing our society today and has geared her towards working to understand them so that one day she can be a vessel

of change.

The doctoral student holds that learning can never be a dull moment in Belgium since the country is undeniably scenic with numerous sightseeing sites that can create a relaxing and rejuvenating weekend getaway for students. Not forgetting the amazing cuisines and hospitality of the Belgians! Lilian can hardly hide her joy as she reiterates, “I am so proud to be at the University of Antwerp and excited to turn a new page and start writing a transformational experience of this journey! “I am indebted to the JOOUST fraternity and VLIR UOS Scholarship programme for giving me an opportunity to spread my wings in a new frontier of life!” And Lilian’s journey continues.



Lilian unwinds outdoor after a long day of study



Lilian and fellow colleagues, Samuel Olala (center) and Dorothy Gwada who are also beneficiaries of the JOOUST VLIR-IUC Scholarship

“It was a great honour to have been specially selected to embark on a life-changing journey of education and research”

A GLANCE AT VARIOUS UNIVERSITY PROJECTS AND RESEARCH ACTIVITIES

a. Azolla farming as an alternative protein source for domesticated animals by Dr. Evans Nyakeri and Collins Asino.

Azolla is a fern plant usually found in marshy and water logged areas such as swamps whose role in the natural environment is water bioremediation. However, the plant has been ascertained to have a high protein content ranging between 20.6% to almost 30%. Subsequently, the plant is ingrained with the potential to serve as an alternative source of protein in the face of exorbitant prices of conventional protein feeds. Farmers were taken through farming, harvesting, processing and feed incorporation and other alternative uses such as serving as organic manure, nitrogen fixation and weedicide functions in rice planting areas.



Dr. Nyakeri (center) explains the importance of Azolla farming

b. Mushroom farming using cellulose containing organic waste by Dr. Benson Onyango and Benson Odera.

Mushroom is a known delicacy in Kenya and across the globe and beyond. However, due to excessive exposure to chemicals in the farming process, it is becoming difficult and unsafe to harvest mushroom in its natural environment. Researchers in Jaramogi Oginga Odinga University of Science and Technology have come up with an innovative way of farming this delicacy while managing organic waste in the environment.



From left to right Mr. Odera, Mr. Owiti and Mr. Asino display the stages of mushroom farming

The process involves using agricultural waste such as sawdust or straw as a substrate for growing mushrooms. The substrate is sterilized to kill any bacteria or fungi that may compete with the mushroom mycelium for nutrients. The sterilized substrate is then inoculated with mushroom spores or spawn and incubated under controlled conditions until the mushrooms are ready for harvest.

c. Smart automated poultry farming system by Dr. Abibo Jack

This is a system that uses technology to automate various aspects of poultry farming such as feeding and watering. The system uses sensors to monitor the environment in which the birds are kept and adjust conditions such as temperature and humidity accordingly. This helps to reduce labor costs while improving efficiency and productivity.

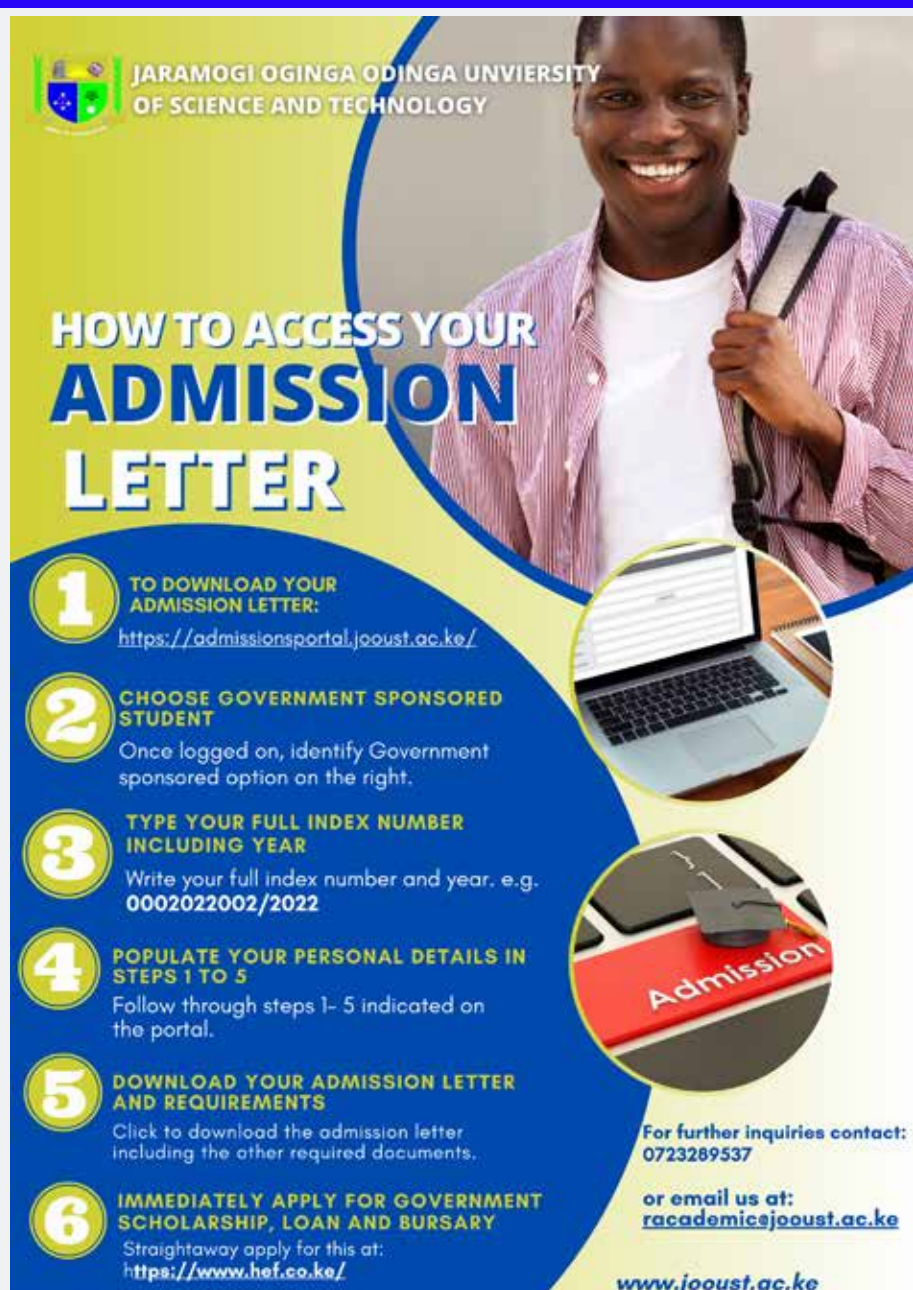


Dr. Jack Abibo (right) explaining how the automated feeder works

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JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

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