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SEAMEO BIOTROP Welcomes UNIVERSITI SAINS MALAYSIA DELEGATION IN BOGOR

Prof. Dato' Dr. Amirul Al-Ashraf Bin Abdullah stated, 'This visit provides our students with invaluable exposure to the international research environment and fosters cross-cultural understanding. We look forward to more similar exchanges in the future.'

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Promoting Zero Waste Circular Economy, SEAMEO BIOTROP and Essential Oil Council Conduct Citronella Circular Economy Essential Oil Business Success Training

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SEAMEO BIOTROP Developing Biorisa Biofertilizer as an Environmentally Friendly Solution

SEAMEO BIOTROP Biological fertilizer solutions that offers many benefits that agriculture remains sustainable

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Director's Message

Dear Valued Readers,

Welcome to BIOCourier Vol 26 No 2. We are thrilled to share the latest advancements and initiatives from SEAMEO BIOTROP. Our commitment to fostering sustainable agricultural practices and environmental conservation remains unwavering. In this edition, we are proud to highlight our development of the Biorisa biofertilizer, an eco-friendly solution aimed at enhancing soil health and crop productivity while minimizing environmental impact.

Our collaboration with various institutions continues to thrive, as evidenced by our recent partnerships and workshops. The Citronella Circular Economy Essential Oil Business Success Training is a testament to our dedication to promoting zero-waste practices and empowering local entrepreneurs with the knowledge to maximize the economic potential of essential oils.

In this issue, you will also find insightful articles on biodiversity conservation, nutritional literacy, and innovative biopreservation methods. These stories reflect our holistic approach to addressing the diverse challenges faced by our region and our relentless pursuit of sustainable solutions.

Thank you for your continued support and engagement with SEAMEO BIOTROP. Together, we can make significant strides towards a greener, more sustainable future.

Warm regards,

Dr. Zulhamsyah Imran
Director, SEAMEO BIOTROP

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**POPULAR
ARTICLE**




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SEAMEO BIOTROP



DEVELOPING BIORISA BIOFERTILIZER AS AN ENVIRONMENTALLY FRIENDLY SOLUTION

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Problem Faced

Plants require sufficient nutrients in their growth, both macro and micronutrients. A nutrient is a substance that can influence plants' growth and physical development. The availability of macronutrients such as N, P, and K is essential for plants to grow and develop. Nutrients cannot be replaced with other elements because they are essential elements that must be present in specific quantities at appropriate rates for each plant. The speed of nutrient uptake by the plant root system depends on the speed at which the plant roots reach the nutrients. In the soil, P nutrients move by diffusion. All factors that play a role in determining the speed of P diffusion to the roots and root development in the soil will determine the availability of P to plants. These factors include soil factors (humidity, buffering capacity, temperature) and plant factors (root length, root density, and root infection).

Currently, agriculture faces serious land degradation problems from intensive agricultural activities. Excessive use of chemical fertilizers and pesticides damages soil health, kills essential microorganisms, and builds dangerous chemicals in the soil. In addition, unsustainable land cultivation techniques, such as excessive plowing and poor irrigation, also increase the risk of damage to soil structure. As a result, the soil becomes dense and complex, which reduces the soil's ability to absorb and retain water and increases the risk of erosion. All of these factors cause a decrease in soil fertility and reduce agricultural land productivity, making the land less supportive for optimal plant growth.

The Role of SEAMEO BIOTROP

In facing these challenges, the Tropical Regional Center, SEAMEO BIOTROP, Indonesia, has contributed to creating sustainable agriculture to balance agricultural needs and protect the environment. BIORISA Fertilizer is here to be an environmentally friendly solution for plants and the environment. BIORISA is a biological fertilizer consisting of a group of living organisms (Arbuscular Mycorrhizal Fungi) whose activities increase the nutrient uptake capacity of plants by colonizing roots, increasing plant roots, shoot growth, and increasing soil fertility. The activity of microorganisms helps improve soil conditions by synthesizing and releasing compounds such as polysaccharides and glomalin, which can enhance soil aggregation and structure. Using BIORISA, either single or combination treatments, can increase soil pH and C-Organic after planting (Rosita, 2020). It gets along with almost 90% of plant species (agriculture, forestry, plantations, and forage plants), Helps increase the efficiency of nutrient absorption (especially P&K), and acts as a bioremediation agent on marginal land. BIORISA infects the host plant's root system, producing an intensive hypha network so that the plant can increase its capacity to absorb nutrients.

Arbuscular mycorrhizal fungi belong to the Endogonoceae family, Muccorales order, and Zygomycetes class (Simamora et al., 2015). Mycorrhiza is known to help plants absorb nutrients such as nitrogen, potassium, sulfur, and phosphorus by absorbing nutrients and air by expanding the absorption area through its external hyphae network. Synergistic interactions with phosphate-solubilizing and nitrogen-fixing bacteria also increase P uptake and root nodule formation (Susilawati et al., 2016). Arbuscular Mycorrhizal Fungi (AMF) is a symbiotic association between plants and fungi that colonize the plant root cortex tissue, which occurs during the plant's active growth period. This fungus is often associated with natural plants, such as tomatoes, upland rice, wheat, oil palm, chilies, and melons. The symbiosis between AMF and plants is mutualistic. These arbuscular mycorrhizal fungi live in soil and form beneficial symbiosis with the roots of angiosperms and other plants. Arbuscular mycorrhizal fungi and plant roots have a mutualistic symbiotic relationship that can increase plant growth, especially on marginal lands (Budi et al., 2014).



Inoculation of *C. etunicatum* on bede grass significantly increased plant height, stem diameter, number of leaves, number of tillers, fresh weight of shoots and roots, and dry weight of shoots ($p < 0.05$). Microscopic observations showed that in treated bede grassroots, AMF colonization occurred at $55\% \pm 0.06\%$ with 252 ± 9.82 spores per 10 g of zeolite, whereas in plants that were not inoculated, AMF infection did not occur (Rosita, 2020).

Arbuscular Mycorrhizal Fungi (AMF) have also been widely used by several farmers and researchers in Indonesia as bioremediation agents. Mycorrhiza increases plant resistance to drought and protects plants from pathogens and toxic elements by producing antibiotics and inactivating heavy metals (Ekawati et al., 2016). Rosita (2021) reported *C. etunicatum* and *Bacillus* sp. have phytoremediation capabilities through phytoextraction, rhizofiltration, and rhizodegradation. Plants absorb large amounts of Pb and As polluting metals without damaging plant growth. Enriched Bede grass is able to absorb the pollutant metal Pb between 19.05–93.21 g/plant, and the metal As absorption range is 1.07–14.74 g/plant. The use of isolates of *C. etunicatum* and *Bacillus* sp. effectively reduces the content of polluting metals Pb and As in plant tissue when applied to former coal mine soil. In addition, mycorrhizae produce growth hormones, stimulate the activity of rhizosphere organisms, and improve soil pH and structure through glomalin production, which increases soil aggregation (Pulungan, 2018). Mycorrhiza also plays a role in the mineral cycle by producing hydrolytic enzymes, which are important for mineralizing organic matter and improving soil health (Eliyani et al., 2022). Overall, AMF contributes significantly to plant growth and yield through various mechanisms that improve plant health and soil quality.

Biological fertilizer offers many benefits, one of which is BIORISA. To ensure that agriculture remains sustainable, SEAMEO BIOTROP invites us to work together to educate beneficiaries from an early age about the benefits obtained from mycorrhiza, which benefit not only the plants but also the environment that we love.

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WHAT'S ON SEAMEO BIOTROP



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PROMOTING ZERO WASTE CIRCULAR ECONOMY, SEAMEO BIOTROP AND ESSENTIAL OIL COUNCIL CONDUCT CITRONELLA CIRCULAR ECONOMY ESSENTIAL OIL BUSINESS SUCCESS TRAINING

In support of the zero waste circular economy sustainability program, the Indonesian Essential Oil Council (DAI), the Center for the Promotion of Imports from Developing Countries (CBI), and SEAMEO BIOTROP conducted the Citronella Circular Economy Essential Oil Business Success Training on 27–28 June 2024 at SEAMEO BIOTROP, Bogor. This training was attended by entrepreneurs, researchers, and practitioners focusing on Citronella.

Essential oils, particularly from Citronella, have immense economic potential as high-value commodities in the international market and as products that support environmental sustainability by applying the circular economy concept. Reducing Citronella waste is crucial to maximize the use of raw materials and produce sustainable economic and environmental benefits.

The Citronella Circular Economy Essential Oil Business Success Training aimed to improve education and technical training in cultivating and managing oyster mushroom derivative products based on Citronella distillation waste, supporting a zero-waste circular economy. The specific objectives included: (1) disseminating research results related to cultivating oyster mushrooms using Citronella oil distillation waste; and (2) training participants in the cultivation and processing of oyster mushrooms into various derivative products.

The training was officially opened by Acting SEAMEO BIOTROP Deputy Director of Administration, Ir. Sri Widayanti, M.Si., who stated that participants would gain new insights and be motivated to contribute to developing an environmentally friendly and sustainable essential oil industry. Mr. Arianto Mulyadi, M.Sc. from DAI, expressed his enthusiasm, saying, “We believe that with the right knowledge, participants can utilize natural resources more wisely and sustainably. This training will not only provide economic benefits for the participants but also contribute to environmental conservation.”

Ms. Risa Rosita, M.Si., a training resource person from the Environmental Technology & Security Section (ETS) at SEAMEO BIOTROP, reported that oyster mushroom Bag-log waste at SEAMEO BIOTROP are processed

into BIOPOS compost. Compost processing effectively reduces the amount of organic waste entering landfills, supporting circular economy principles. The use of compost supports sustainable agriculture by minimizing environmental impacts and increasing production sustainability. “The practice of cultivating oyster mushrooms using Citronella waste as a substrate is an effort towards achieving zero waste,” she said.

Mr. Sugih Mukti from ETS-SEAMEO BIOTROP added, “Oyster mushrooms, which have high economic value as a food source, can be processed into diverse and nutritious derivative products.” (rr)



REGIONAL WORKSHOP ON BIODIVERSITY CONSERVATION AND INVASIVE ALIEN PLANT IDENTIFICATION

SEAMEO BIOTROP, in collaboration with Syiah Kuala University and Universiti Sains Malaysia, successfully conducted the “Regional Training Workshop on Biodiversity Conservation and Invasive Alien Plant Identification” on June 24–25, 2024. The event took place at the Faculty of Mathematics and Natural Sciences (FMIPA) of Syiah Kuala University, Aceh.

The workshop saw participation from 65 attendees, including students and lecturers from various universities in Aceh and representatives from Pocut Meurah Intan Forest Park. The primary objective was to enhance participants’ understanding and skills in biodiversity conservation and the identification of Invasive Alien Species (IAS).



Dr. Zulhamsyah Imran, Director of SEAMEO BIOTROP, inaugurated the workshop by stressing the significance of biodiversity conservation and IAS identification. He also shared an overview of SEAMEO BIOTROP’s profile and programs, extending an invitation for collaborative efforts to address the challenges in biodiversity utilization and management. “Managing IAS is crucial for maintaining ecosystem balance and preventing economic losses and environmental damage caused by invasive species,” said Dr. Zulhamsyah.

Prof. Dr. Taufik Fuadi Abidin, Dean of FMIPA at Syiah Kuala University, expressed strong support for collaborative educational and research programs at both national and regional levels.

The workshop featured distinguished speakers, including Chihjen Ko from GBIF Asia, Dr. Soekisman Tjitrosoemito and Dr. Sri Sudarmiyati Tjitrosoedirdjo from SEAMEO BIOTROP, Iqbar S.Si M.Sc and Dr. Saida Rasnovi S.Si M.Si from Syiah Kuala University, and Prof. Madya Dr. Rahmad Zakaria, Dr. Syarifah Ab Rashid, and Dr. Rosazline Rusly from Universiti Sains Malaysia. Topics covered included biodiversity conservation methods, techniques for identifying invasive alien plants, the ecological and economic impacts of IAS, and strategies for IAS management and control.

To deepen participants’ understanding and practical skills, the second day of the workshop included a field trip to Pocut Meurah Intan Forest Park in Aceh, where participants engaged in hands-on activities for identifying and learning about invasive alien plant species.

Additionally, the event featured the signing of a Memorandum of Agreement (MoA) and Implementation Agreement (IA) among SEAMEO BIOTROP, FMIPA Syiah Kuala University, and Universiti Sains Malaysia. Plans for future collaboration include regular webinars hosted alternately by SEAMEO BIOTROP, FMIPA Syiah Kuala University, and Universiti Sains Malaysia. (ak, hcn)

SEAMEO BIOTROP HOSTS PROJECT MANAGEMENT WORKSHOP TO ENHANCE PROGRAM OUTCOMES AND OUTPUTS

SEAMEO BIOTROP conducted a three-day Project Management Seminar and Workshop from 12 – 14 June 2024. The event kicked off with the seminar session on 12 June 2024 in the Jati Room at SEAMEO BIOTROP with 33 participants attending in person. The participants included 19 from SEAMEO BIOTROP, 3 from SEAMEO Qitep in Mathematics, 3 from SEAMOLEC, 2 from SEAMEO CECCEP, 2 from SEAMEO Qitep in Language, 3 from SEAMEO RECFON, and 1 from SEAMEO Qitep in Science. Dr. Jesus C. Fernandez or mostly known as Dr Jess, Deputy Director for the SEAMEO RECFON program, served as the guest speaker.

Dr Jess presentation titled “Making Sense of Project Management Concepts & Principles,” was attended by SEAMEO BIOTROP and various SEAMEO Centres in Indonesia. It covered definitions of terms related to project management, the project management cycle, project management approaches and strategies, and project monitoring and evaluation. The seminar concluded with the interactive discussion on “Opportunities and Challenges in Project Implementation at SEAMEO.” The activities proceeded smoothly, and all participants were very enthusiastic during the Q&A session on project management.

Wendy Nur Falaq, ICT Coordinator at SEAMEO QITEP in Language, shared his experience: “By participating in the project management seminar at BIOTROP, I realized that the programs and projects to support our Center’s initiatives are still not clearly outlined in the FYDP period 2020/2025. The implementation of the project management cycle in activities has also not been structured. The seminar can provide us with inputs in designing the next FYDP. Thank you to the organizing team and speakers.”

The workshop on June 13–14 was exclusively for SEAMEO BIOTROP management and staff, focusing on practical applications of the concepts discussed. The workshop aims to produce a reference document for program management at SEAMEO BIOTROP, including instruments for planning and monitoring programs.

Dr. Zulhamsyah Imran, Director of SEAMEO BIOTROP, emphasized the critical importance of effective project management. “Every project leader needs to find ways to achieve the final goals of their programs, not just run the programs but also determine the outputs and outcomes of each activity.” (as)



SEAMEO BIOTROP AND WIKIMEDIA HOSTS WIKILATIH WORKSHOP ON WIKIPEDIA OPERATION AND EDITING WORKSHOP



SEAMEO BIOTROP working together with Wikimedia Indonesia conducted Wikilatih workshop on Wikipedia operation and editing at its headquarters in Bogor, Indonesia, on 27 May 2024. The event aimed to empower participants with the skills necessary to contribute to Wikipedia, thus enhancing the dissemination of scientific knowledge on tropical biodiversity.

The workshop featured speakers from the staff of Wikimedia Indonesia and volunteer, including Afrizal Maulana Abdi, Ni Putu Diah Asyanti, Adi Purnama, Ni Kadek Ayu Sulastri, Rahma Azizah, Arief Rifki Fadilla, and Dian Agustin. Their guidance was crucial in teaching participants the intricacies of Wikipedia editing and content creation.

The workshop saw the participation of 47 individuals from various institutions, including SEAMEO Qitep in Language, BRIN (National Research and Innovation Agency), Balai Besar Taman Nasional Gunung Gede Pangrango (Mount Gede Pangrango National Park), staff from SEAMEO BIOTROP, and students from the MSIB batch 6 of SEAMEO BIOTROP. This diverse group brought together expertise from different fields, enriching the discussions and collaborations throughout the workshop.

The opening remarks were delivered by the Director of SEAMEO BIOTROP, represented by Mr. Slamet Widodo Sugiarto. In his address, he emphasized the importance of exploring biodiversity information as a hot topic. "Wikipedia, as the most accessed platform, can be a significant opportunity in building a digital literacy ecosystem in the field of tropical biology," said Mr. Sugiarto.

In his welcoming speech, Mr. Rachmat Wahidi, the General Director of Wikimedia Indonesia, emphasized the spirit of "membebaskan pengetahuan" or "liberating knowledge." He provided valuable insights into the significance of digital knowledge dissemination, highlighting the transformative power of making knowledge freely accessible to all.

The hands-on training sessions covered guidelines and policies for disseminating information on Wikipedia, editing existing articles, and creating new content. This initiative is expected to significantly contribute to the visibility and impact of research. Participants also discussed the creation of a dedicated Wikipedia repository for SEAMEO BIOTROP, aimed at organizing and sharing their extensive biodiversity data. This repository is envisioned as a valuable resource for researchers, educators, and policymakers.

By the end of the workshop, participants were equipped with the skills to contribute articles on biodiversity to Wikipedia Indonesia, focusing on themes that address climate change. This aligns with SEAMEO BIOTROP's mission to foster knowledge sharing and conservation efforts in the region.

Among the notable outcomes were three outstanding articles initiated by workshop attendees. Taufikurrahman initiated the article on "Derendan". Alvi D. A. contributed by initiating the article on "Phyllanthus fluitans," and Dian Firta P. spearheaded the creation of the article on "Nepenthes longifolia," adding to the platform's resources on carnivorous plants.

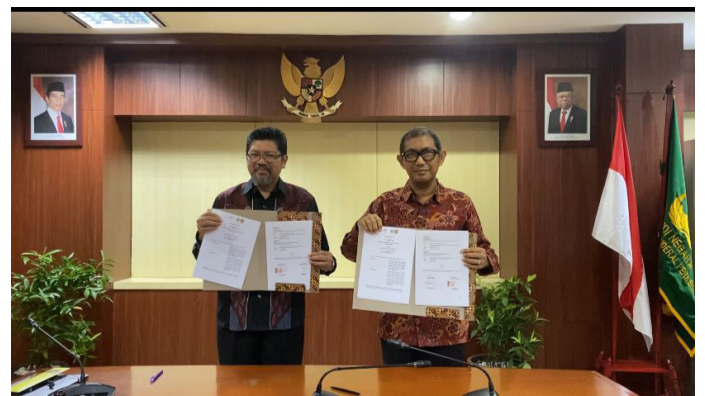
Ade Bagja Hidayat, S. Hut., M. Ling., a participant from Taman Nasional Gunung Gede Pangrango, shared his enthusiasm, stating, "This workshop has been incredibly enlightening. The skills we've gained will not only help in disseminating vital information about our biodiversity but also in engaging a wider audience through Wikipedia."

INITIATING COLLABORATION WITH THE INDONESIAN ESSENTIAL OIL COUNCIL, SEAMEO BIOTROP PREPARES TO CONDUCT TRAINING ON ESSENTIAL OILS

SEAMEO BIOTROP has established a collaboration with the Indonesian Essential Oil Council (Dewan Atsiri Indonesia - DAI) through the signing of a cooperation agreement (PKS) with the Indonesian Essential Oil Council. The event was held on Tuesday, June 4, 2024, at the Ministry of Agriculture, Jakarta. The purpose of this collaboration is to organize training activities on the cultivation and management of derivative products of oyster mushrooms based on citronella distillation waste. Additionally, the parties agreed to provide education on innovations supporting a sustainable zero-waste circular economy.

Dr. Zulhamsyah Imran, Director of SEAMEO BIOTROP, in his speech, stated, "Hopefully, this collaboration is not only limited to training, but also introduces the biodiversity of Indonesia." to which Dr. Ir. Irdika Mansur, the Head of the Indonesian Essential Oil Council and former Director of SEAMEO BIOTROP, replied, "I hope the cooperation between SEAMEO BIOTROP and the Indonesian Essential Oil Council may runs smoothly and benefits to the betterment of essential oil industry in Indonesia and Southeast Asia."

Indonesia has been known as the center of spices in the world, including essential oil products. There are 40 types of Indonesian essential oils traded globally, about 12 of which have been exported to world markets. Some Indonesian essential oil products are even very dominant in the world market, such as patchouli oil, vetiver, nutmeg, and cloves. National essential oil production activities involve many parties, ranging from farmers producing raw materials, small and medium-sized refining industries, traders, collectors, to advanced processing industries and exporters. The Indonesian Essential Oil Council (DAI) is an organization dedicated to the development and promotion of Indonesia's essential oil industry. (as)



SEAMEO BIOTROP WELCOMES UNIVERSITI SAINS MALAYSIA DELEGATION IN BOGOR

SEAMEO BIOTROP warmly welcomed the delegation from Universiti Sains Malaysia (USM) to Bogor, Indonesia! The visit, held from May 13 to 16, 2024, included 33 students from the USM Biosciences Society, accompanied by the Dean of the School of Biological Sciences, Prof. Dato' Dr. Amirul Al-Ashraf Bin Abdullah, who is also a Governing Board Member of SEAMEO BIOTROP for Malaysia.

Other notable USM delegates included Prof. Dr. Latiffah Zakaria, Vice Dean; Assoc. Prof. Dr. Darlina Md Naim, Programme Manager (Animal Biology and Plant Biology Programme); Dr. Rosazlina Rusly, Advisor (Biosociety School of Biological Sciences, USM); and Dr. Syarifah Ab Rashid, Lecturer.

The visit's agenda was designed to strengthen collaboration and knowledge exchange between SEAMEO BIOTROP and Universiti Sains Malaysia. On May 13, the delegation visited Monas and enjoyed shopping at Thamrin City. The activities on May 14 began with an opening ceremony at SEAMEO BIOTROP, followed by a campus tour, a visit to Bogor Botanical Gardens, and a podcast session. On May 15, the delegation participated in the Inter-University Bio-Link 7.0 at the Faculty of Mathematics and Natural Sciences, IPB University, where they were welcomed by the Dean, Mr. Barry. The visit concluded on May 16 with the delegation's return to Malaysia.

Prof. Dato' Dr. Amirul Al-Ashraf Bin Abdullah, leading the delegation, shared his enthusiasm about the visit: "This visit marks a significant milestone in our collaboration with SEAMEO BIOTROP. It provides our students with invaluable exposure to international research environments and fosters cross-cultural understanding. We look forward to many more such exchanges in the future."

Iwani Maisarah Binti Norizham, the student coordinator for the visit, added, "This experience has been incredibly enriching for all of us. The opportunity to engage with peers and faculty from SEAMEO BIOTROP and IPB University has broadened our horizons and inspired us to pursue excellence in biosciences. We are grateful for the warm hospitality and the comprehensive agenda prepared for us."

The visit concluded on a high note, with participants expressing optimism about the strengthened ties and future collaborative efforts between the institutions. Together, SEAMEO BIOTROP and Universiti Sains Malaysia continue to inspire and support sustainable science education.





SEAMEO BIOTROP HOLDS MOTIVATIONAL PSYCHOLOGY SEMINAR

SEAMEO BIOTROP held its first MOMI CLOUDIA (Monday Mind Cloud Idea) of 2024 on Monday, May 20, 2024, with the theme “Inspiring Employees for Optimal Performance.” This event aimed to boost participants’ motivation and work ethic to achieve maximum productivity. The seminar took place in the Matoa Room, SEAMEO BIOTROP, with Iestri Kusumah, S.PSI., CBC, also known as Teh Is, as the speaker.

Teh Is, the founder and mentor of @psytalkindonesia, explained that the work environment and job motivation are the largest factors influencing employee performance. “A conducive work environment and high motivation play a significant role in increasing employee productivity, followed by work discipline, leadership style, work experience, and loyalty,” she stated. She also emphasized the importance of identifying individual work motivation triggers.

Furthermore, Teh Is discussed the Johari Window theory, a practical technique that managers and team leaders can use to improve communication, self-awareness, and productivity in the workplace. “The Johari Window explains four areas within us: the open area, the blind area, the hidden area, and the unknown area. Understanding this can help us communicate better and understand ourselves and our coworkers,” she explained.

The event also included practical sessions where 50 in-person participants were asked to reflect on their strengths and weaknesses. The atmosphere was smooth and warm, filled with laughter as each participant shared their reflections.

In her opening remarks, SEAMEO BIOTROP HRAD Manager, Mrs. Tenni Wahyuni, emphasized the importance of motivation for BIOTROP staff. “Motivation is key to improving staff performance and productivity. With this seminar, we hope all participants can find ways to motivate themselves and their work teams,” she stated.

Besides the in-person attendees, the general public and representatives from SEAMEO CENTRE INDONESIA (SCI) also participated virtually through SEAMEO BIOTROP’s YouTube channel. This MOMI CLOUDIA series on motivational psychology is expected to provide inspiration and enthusiasm to all participants, both in-person and online.



“With increased motivation and self-awareness, we hope that optimal performance can be achieved by all participants, which in turn will also enhance productivity and work quality at SEAMEO BIOTROP,” Teh Is concluded the session. (as)

YOUNG LIVING EXPLORES COLLABORATIVE OPPORTUNITIES WITH SEAMEO BIOTROP

SEAMEO BIOTROP welcomed esteemed delegates from Young Living on Monday, 29 April 2024, to explore avenues for collaboration and partnership. The visit aimed to harness the potential of local plants for product development and community empowerment.

Representing Young Living were esteemed researchers Dr. Lin and Dr. Wu, whose expertise in botanical compounds holds promise in understanding disease progression and aiding patient care. Dr. Wu, currently a professor at Tjugu University in Nagoya, Japan, emphasized the fusion of Eastern medicinal wisdom with Western scientific rigor, citing the unique compounds found in special Okinawan citrus as pivotal in enhancing Young Living's product line.

Beyond mere product sales, Young Living is committed to revolutionizing consumer habits towards healthier, plant-based alternatives. Ms Raya, Head of Marketing at Young Living, provided insights into the company's global reach, boasting partnerships with over 5 million brands and operations in 70 countries, with 23 farms worldwide dedicated to sustainable production.

The discussion, led by Dr. Supriyanto, an expert at SEAMEO BIOTROP, delved into Indonesia's rich resources of essential oil-producing plants. Dr. Supriyanto proposed the exploration of several species for their essential oil utilization, including Salam Lemon, Aquilara sp., and Clausena anisata. Those plants were renowned by the local for their health benefits and potential economic impact, yet facing technological gaps and endangerment.

Of particular concern was the dwindling population of Gaharu trees, with three out of nine Indonesian species already extinct and five endangered due to overexploitation. Proposed solutions centered on plantation development and conservation efforts to safeguard these valuable resources.

The visit continued with campus tour, showcasing SEAMEO BIOTROP's natural product laboratory, aromatherapy plant nursery, and plantation facilities.(hcn)



SEAMEO BIOTROP SECTION HEAD TRAINS SCHOOL REPRESENTATIVES ON NUTRITIONAL LITERACY THROUGH SCHOOL GARDENS AT SEAMEO RECFON



In a bid to bolster nutritional literacy among the young generation, Risa Rosita S.Si., M.Sc., Head of the Technology & Environmental Safety (ETS) Section at SEAMEO BIOTROP, served as a resource person during the School Garden Training for Nutritional Literacy organized by SEAMEO RECFON on Tuesday, 30 April 2024. The event saw teacher representatives from Public Senior High Schools 24, 31, 47, 65, and 110 in Jakarta who gathers to partake in the initiative titled “The Effect of School-Based Nutrition Interventions in Promoting Healthy Eating Behavior among Adolescents in Indonesia”.

Risa Rosita S.Si., M.Sc. emphasized the importance of equipping participants with comprehensive knowledge of gardening practices, encompassing fundamental techniques, agronomic principles, soil understanding, plant nutrition, irrigation, pest and disease management, and suitable planting seasons. Such expertise, she stressed, not only enhances gardening efficiency but also ensures safety and environmental sustainability.

The training commenced with an inaugural session held in the Lecture Room of the SEAMEO RECFON Building, attended by 22 participants from SEAMEO RECFON, SEAMEO BIOTROP, and the aforementioned high schools. Dr. Judhiastuty Februhartanty, Program Research and Development Coordinator, inaugurated the proceedings, underscoring the training’s objective of enabling participants to strategize the use of school gardens for nutrition education. The curriculum delved into topics such as the significance of school gardens, their utilization for nutritional literacy, and practical gardening techniques applicable within school premises.

Following the training, participants were expected to proficiently: (1) elucidate the concept and significance of school gardens; (2) devise strategies for leveraging school gardens as platforms for nutrition education; and (3) disseminate gardening methodologies tailored for school environments.(rr)

SEAMEO BIOTROP STAFF, RETIREES, AND GUESTS GATHER FOR HALAL BIHALAL 1445H

Gathered on 24 April 2024, in the Convention Hall of SEAMEO BIOTROP, the event welcomed 285 participants, comprising staff, MSIB students, retirees, and guests from SEAMEO Centers Indonesia and Dikti. The atmosphere was set with the recitation of the holy Quran by Ust Zaenudin, followed by a soulful recitation by Putri Dina Rahayu.

In his opening remarks, SEAMEO BIOTROP's Director, Dr. Zulhamsyah Imran, emphasized the event's importance, stating, "Our purpose today extends beyond mere festivity; it is about building synergy and boosting our spirits towards BIOTROP's mission of environmental preservation in the tropical region." Reflecting on Ramadan's essence, he urged attendees to maintain gratitude and piety beyond the month, highlighting, "Maintaining bonds of goodwill and seeking forgiveness are integral to our practice as Muslims."

The Director concluded with a humble plea, expressing, "I extend sincere apologies for any shortcomings we may have encountered. May this gathering inspire us to redouble our efforts in line with the divine will." Following the opening remarks, a video was presented, launching SEAMEO BIOTROP's four new main projects for 2024 under the School of Biodiversity umbrella program, namely: Agro-Eco-Edu Tourism, Advance Tropical Biodiversity Education, Optimization of Facilities and Assets, and BIOTROP Academic Leaders Program.

The main event featured a motivational speech by Ir. Jamil Azzaini, MM, titled "Working as if Pursuing a Hobby." He emphasized the importance of finding strong reasons to work, such as rational reasons, emotional benefits, and spiritual significance. Additionally, he highlighted the importance of having a growth mindset and grit to achieve long-term goals.

The event concluded with participants exchanging greetings and enjoying the refreshments served. (hcn, pdr)





INTERN STUDENTS

APRIL TO JUNE 2024



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