

IKP NEWSLETTER

FOREWORD FROM THE DIRECTOR

PROF. TS. DR. SITI KHAIRUNNIZA BEJO



It gives me great pleasure to introduce the latest edition of the IKP Newsletter, our platform for sharing the institute's achievements and transformations with colleagues, industry partners, and stakeholders. In this edition, we celebrate innovation, knowledge, and the collective impact of our vibrant community. As we look to 2025, we thank you for being part of our journey. 2025 brought challenges, growth, and remarkable accomplishments. To strengthen our research capabilities, we upgraded facilities and provided new high-tech laboratory equipment. Consulting projects emerged as a major strength for IKP (>RM1.6 million), complemented by external grant support totalling RM520,118—comprising 21% private grants, 14% international grants, and 65% public grants. Engagement within our industry and community networks also expanded, with projects totalling RM1.1 million—75% from industry, 4% from community engagement, and 21% from training and laboratory services. IKP recorded 59 journal publications, including 24 in Q1/Q2 journals and 22 in Q3/Q4 journals. Innovation outputs rose to six, highlighted by the commercialization of TRICHOMAX, reflecting a strategic shift toward high-impact research.

Our impact extended beyond academia. Sixteen strategic roadshow series delivered positive outcomes, while IKP's visibility grew through booth operations and knowledge-sharing across multiple channels. Internal operations were strengthened through talent development. Globally, IKP's reputation was enhanced through appointments to Editorial Boards, as a Fellow of The World Academy of Sciences, and as Adjunct Professor.

In conclusion, 2025 demonstrated continued progress and rising excellence for IKP. We invite you to explore this newsletter to learn more about our initiatives, achievements, and the journey ahead. Together, let us continue to push boundaries, inspire change, and make a meaningful impact on the world.

MAIN HIGHLIGHT

ICPTech2025 STRENGTHENS ACADEMIA-INDUSTRY COLLABORATION TOWARDS SUSTAINABLE PLANTATION PRACTICES

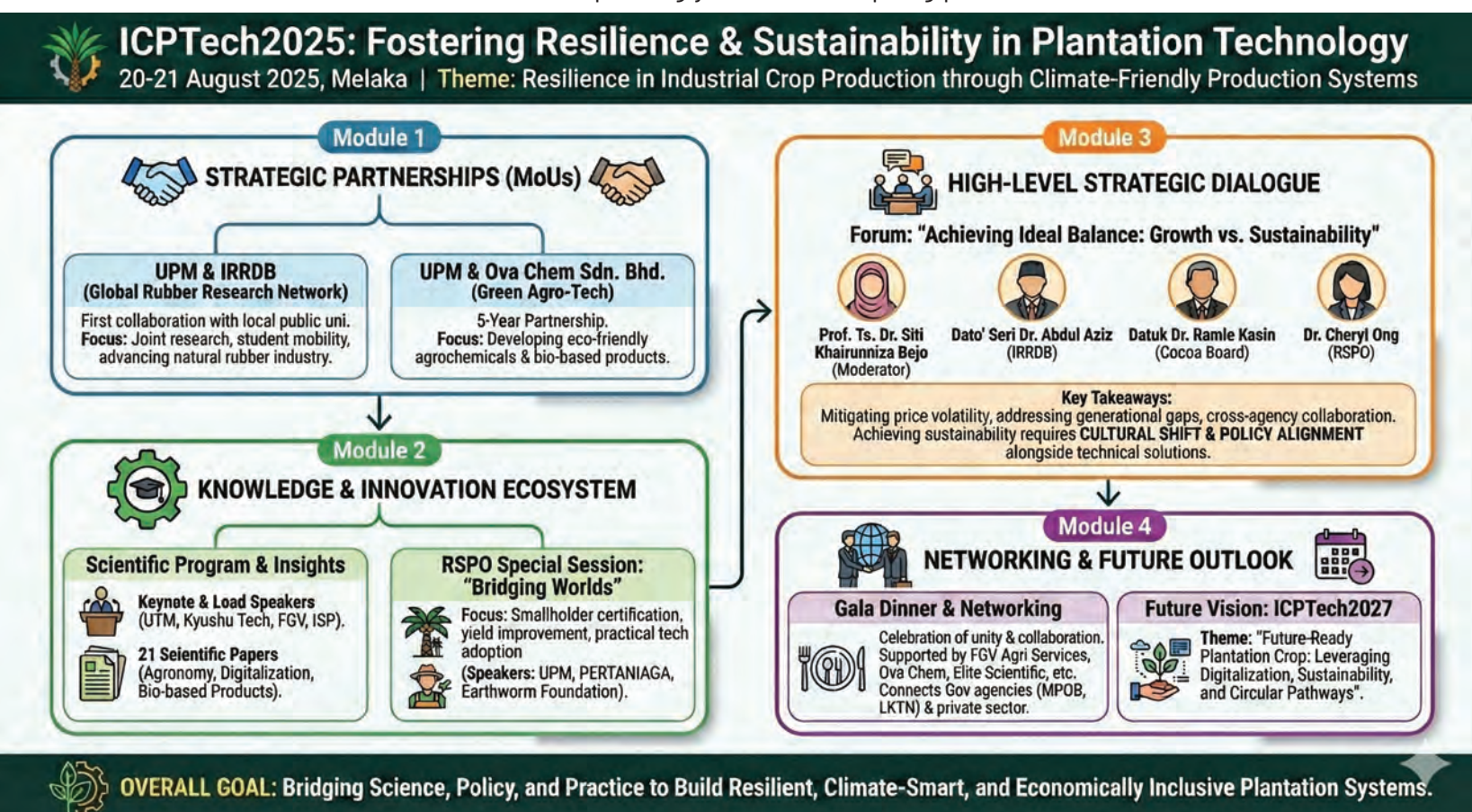
MELAKA, 20-21st August – The 3rd International Conference on Plantation Technology 2025 (ICPTech2025), organized by the Institute of Plantation Studies (IKP), Universiti Putra Malaysia (UPM), successfully concluded on 21 August at Dusit Princess Melaka, uniting over 130 participants under the theme “Resilience in Industrial Crop Production through Climate-Friendly Production Systems.” Officiated by Prof. Dr. Ahmad Zaharin Aris, the opening ceremony was marked by the strategic signing of two five-year Memorandums of Understanding (MoUs) aimed at advancing research and student mobility. The first, between UPM and the International Rubber Research and Development Board (IRRDB)—represented by Secretary-General YBhg. Dato’ Seri Dr. Abdul Aziz Sheikh Abdul Kadir—establishes UPM as the first local public university to partner with this global network. The second MoU, signed with Ova Chem Sdn. Bhd., represented by Mrs. Norazni Azlan, focuses on developing green agrochemicals and bio-based products, cementing a commitment to sustainable agricultural innovation.

The conference’s robust scientific program featured insights from distinguished keynote and lead speakers representing institutions such as Universiti Teknologi Malaysia, Kyushu Institute of Technology, FGV Holdings, and the Incorporated Society of Planters. Alongside 21 scientific papers covering themes from sustainable agronomy to digitalization, a special session hosted by the Roundtable on Sustainable Palm Oil (RSPO) titled “Bridging Worlds” proved pivotal. Moderated by Ms. Kertijah Abdul Kadir, this session explored certification and smallholder impact, featuring presentations by Dr. Tey Yeong Sheng (UPM), Encik Saiful Amrin (PERTANIAGA), and Ms. Ooi Kiah Hui (Earthworm Foundation) on improving yields and adopting practical

technologies for smallholders.

A focal point of the event was the high-level forum, “Achieving the Ideal Balance between Growth and Sustainability in the Plantation Industry,” moderated by IKP Director Prof. Ts. Dr. Siti Khairunniza Bejo. Panelists including YBhg. Dato’ Seri Dr. Abdul Aziz (IRRDB), YBhg. Datuk Dr. Ramle Hj. Kasin (Malaysian Cocoa Board), and Dr. Cheryl Ong (RSPO) debated critical issues such as mitigating price volatility, addressing generational gaps in farming, and the necessity of cross-agency collaboration. The consensus emphasized that achieving sustainability requires a cultural shift and policy alignment alongside technical solutions, reinforcing the conference's goal of bridging science and practice.

The spirit of collaboration extended into the social sphere with the ICPTech2025 Gala Dinner, supported by main sponsor FGV Agri Services Sdn. Bhd. and others including Ova Chem and Elite Scientific Instruments. The evening celebrated the industry's unity with cultural performances and networking opportunities for stakeholders from government agencies like MPOB and LKTN, as well as private sector players. ICPTech2025 Chairperson, Assoc. Prof. Dr. Ganesan Vadimalai, expressed hope that these synergies would foster climate-smart systems, announcing that the conference will return in 2027 with the theme “Future-Ready Plantation Crop: Leveraging Digitalization, Sustainability, and Circular Pathways.”



HIGHLIGHTS

PPF15 STRENGTHENS THE FUTURE OF SUSTAINABLE RUBBER INDUSTRY

SERDANG, 16th October – The Putra Plantation Forum 15 (PPF15), organized by IKP, UPM, brought together international rubber experts, young researchers, and industry players to discuss the future direction of sustainable rubber and emerging trends in modern plantation sectors.

Held under the theme “Advancing Sustainable Rubber Production Through International Research Collaboration”, the forum featured prominent figures including Dato’ Seri Dr. Abdul Aziz S.A. Kadir, Secretary General of the International Rubber Research and Development Board (IRRDB), who shared over five decades of experience in the natural rubber industry. He emphasized the importance of cross-border collaboration in research and development (R&D), and introduced innovative rubber-based products such as ENR (Ekoprena) and DPNR (Pureprena), which have expanded industrial applications.

The key highlights from the forum were: (1) IRRDB’s insights on historic expeditions to Brazil and the development of high-yielding rubber clones; (2) Emphasis on disease resistance, latex quality, and technological integration in rubber plantations; (3) Proposal to adopt Thailand’s research funding model for implementation in Malaysia; (4) Introduction of IRRDB’s training programs and the prestigious Sekhar Award to recognize excellence in the rubber sector.



IKP Director, Prof. Ts. Dr. Siti Khairunniza Bejo, stated that the forum serves as a bridge between academia and industry, aligning with UPM’s commitment to advancing sustainable plantation agendas. Meanwhile, Prof. Dr. Wong Mui Yun, Chairperson of the Organizing Committee, highlighted the forum’s goal to enhance the economic value of plantations through knowledge sharing and industry synergy.

The forum was attended by 120 participants, including researchers, students, and industry representatives, who seized the opportunity to engage with experienced experts and explore new potentials in tapping technology, rubber processing, and livestock integration within rubber plantations.



IKP STRENGTHENS KNOWLEDGE TRANSFER THROUGH STEM ACTIVITIES IN CAMERON HIGHLANDS



CAMERON HIGHLANDS, 12th November – continues to strengthen its role in community knowledge transfer by organizing a STEM activity program at Sekolah Jenis Kebangsaan Tamil (SJKT) Ladang Boh 2 during a working visit to Cameron Highlands from 12 to 14 November 2025.

The program received strong support from the Pahang State Education Department and the management of SJKT Ladang Boh 2. Located 10 kilometers from Habu, Ringlet, the school sits within the BOH Plantations Sdn Bhd estate and has received student development assistance from the company.

General Manager of BOH Plantations Sdn Bhd, Mr. Seow Chee Chiang, attended the event and expressed the company’s commitment to supporting local education by sponsoring food and beverages for students during the program.

A total of 32 students from Year 1 to Year 6 participated in STEM activities that combined theoretical learning, innovation, and creativity. Activities included colour recognition and imaginative tasks for lower primary students, while upper primary students built rockets based on scientific principles.

The Headmistress of SJKT Ladang Boh 2, Madam Thevagi Sabathavan, expressed her heartfelt gratitude for IKP’s visit to their school. “This is the first time a higher education institution has visited our school, which is located quite far inland. I would be honoured if IKP would consider collaborating with our school in the future for networking programs in agriculture and education,” she said in her welcoming speech.

IKP Director, Prof. Ts. Dr. Siti Khairunniza Bejo, also emphasized that the program received full support from the management of Universiti Putra Malaysia (UPM), BOH Plantations Sdn Bhd, and the school. “This program is not just an educational activity, but a symbol of integration between education, research, and community service in building a sustainable learning ecosystem for the future,” she stated.

The program aims to inspire students to explore their potential in STEM fields and boost their confidence in learning.



RECOGNITIONS

APPOINTMENT AS ADJUNCT PROFESSOR AT VIT CHENNAI



SERDANG, 1st September – IKP, UPM proudly congratulates Prof. Ts. Dr. Siti Khairunniza Bejo, on her appointment as an Adjunct Professor at Vellore Institute of Technology (VIT) Chennai, India. This prestigious three-year tenure recognizes her outstanding leadership in agricultural innovation and significant contributions to academia. As a premier private engineering institutions, VIT Chennai serves as a strategic partner for this initiative. Prof. Khairunniza's role will focus on driving collaborative research and teaching, aiming to strengthen inter-institutional ties and enrich the academic experience for students and researchers at both UPM and VIT.

BRIDGING SCIENCE AND TECH FOR RESILIENT FARMING AT IAGRIS 2025



KUALA LUMPUR, 10th September – Prof. Ts. Dr. Siti Khairunniza Bejo delivered a keynote on sustainable agriculture at the 2nd International Agriculture Revolution Symposium (IAGRIS) 2025 held at PWTC and organized by UniMAP. The event united researchers and policymakers to modernize the sector. She emphasized that tackling food security and climate change requires "cross-disciplinary collaboration." She also urged the integration of agricultural science with engineering and digital technologies to create data-driven, resilient farming systems. By merging diverse expertise, IAGRIS 2025 aims to advance sustainable plantation development and improve global disease management.

APPOINTMENT AS FELLOW OF TWAS FOR 2026



SERDANG, 13th October – YBhg. Prof. Dr. Wong Mui Yun, Deputy Director of IKP, UPM, has been elected as a Fellow of The World Academy of Sciences (TWAS) for 2026. Effective January 1, 2026, this prestigious appointment recognizes her exceptional contributions to plant pathology and biotechnology, as well as her dedication to advancing science for sustainable development in developing nations. As a new TWAS Fellow, Professor Wong joins an elite global network of scientists, further cementing UPM's reputation as a leader in agricultural innovation and scientific excellence on the world stage.

“INISIATIF IKHTIAR SEJATI MADANI 2025” GRANT



SERDANG, 15th October – IKP proudly announces the appointment of YBhg. Prof. Ts. Dr. Siti Khairunniza Bejo as the Project Leader for the Program Sekolah Kampung Angkat MADANI UPM, a key initiative under the Inisiatif Ikhtiar Sejati MADANI 2025. Her project, titled "Program Komuniti AgroTech Muda Celik Pertanian," has been awarded a grant of RM10,000 and is set to run from September 2025 through September 2026. This program aims to empower the younger generation with modern agricultural technology and literacy, reflecting UPM's dedication to community service and sustainable innovation. It is hoped that this project makes a lasting impact and inspires both academics and the public.

IKP RESEARCHER REPRESENTS UPM AT I-CRAFT2025

GANJA, AZERBAIJAN, 23rd October – The 5th International Conference on Research of Agricultural and Food Technologies (I-CRAFT 2025) was successfully held from 20 to 23 October 2025 at the Heydar Aliyev Center and Azerbaijan State Agricultural University (ASAU) in Ganja, Azerbaijan. The event was jointly organized by Çukurova University, Türkiye, and ASAU, drawing participation from global researchers, academics, and industry experts to explore the latest advancements in agricultural and food technologies.

Themed around sustainability, climate resilience, and technological integration in agro-industrial systems, the conference served as a dynamic platform for knowledge exchange and international collaboration. Associate Professor Dr. Mohd Rafein Zakaria from the Institute of Plantation Studies, Universiti Putra Malaysia (UPM), participated as a member of the Organizing Committee. Representing UPM, he contributed to the academic coordination of the event and played a key role in facilitating scholarly engagement throughout the conference.

On 21st October 2025, Dr. Mohd Rafein delivered an invited presentation at ASAU titled "Integrating Methane Recovery and Composting for Sustainable Biomass Conversion in Palm Oil Waste Management." His talk highlighted innovative approaches to palm oil waste utilization through circular bioeconomy strategies, emphasizing the dual benefits of sustainable waste management and renewable energy recovery. The session attracted strong interest from attendees, particularly those focused on sustainable agricultural practices and environmental technologies.

In addition to the academic sessions, the organizing committee, including Dr. Mohd Rafein, was invited to a courtesy meeting with representatives from the Türkiye Consulate in Ganja, further strengthening diplomatic and academic ties between participating nations. I-CRAFT 2025 concluded with a renewed commitment to fostering global partnerships in agricultural research. The conference also opened new avenues for collaborative projects between UPM, Çukurova University, and ASAU, reinforcing the importance of cross-border cooperation in addressing global food and environmental challenges.



CANAL-CITY UNIVERSITY COOPERATION MECHANISM (CUCM) INAUGURAL CONFERENCE

YANGZHOU, CHINA, 10th December – Universiti Putra Malaysia solidified its status as a global collaborator by joining the inaugural Canal-city University Cooperation Mechanism (CUCM) as a founding member. Representing UPM's Vice Chancellor, Prof. Dr. Wong Mui Yun, Deputy Director of the KP, traveled to Yangzhou, China, from December 7-10, 2025, to join delegates from 23 universities across 10 countries. The conference, themed "AI Bridging Eras, Sailing Together," focused on leveraging artificial intelligence for educational innovation and sustainable civilizational dialogue.

The event marked several significant milestones, including the election of Nanjing University as the first rotating chair and the official launch of the CUCM logo and digital platforms. By participating in this non-profit consortium, UPM aims to strengthen multilateral cooperation in areas such as research innovation, technology transfer, and cultural exchange. This strategic partnership provides a robust framework for UPM to leverage collective strengths with international peers, fostering the development of future leaders prepared to address pressing global challenges in an increasingly interconnected world.



RECOGNITIONS

PROF. DR. WONG MUI YUN HONOURED WITH EXCELLENT RESEARCH AND INNOVATION AWARD 2025

SERDANG, 17th December – The Deputy Director of IKP, Prof. Dr. Wong Mui Yun, FASc, received the Excellent Research and Innovation Award 2025 from the Agricultural Protection and Development Association of Malaysia (APDAM) during the 8th Malaysia Agro Excellent Awards 2025 (MAEA 2025) Ceremony.

The ceremony, themed “Sustainable Agriculture: Smart, Sustainable and Secure,” was held on 17 December 2025 from 9.30 am to 12.30 pm at the Auditorium Rashdan Baba, TNCPI Office Building. Prof. Dr. Wong was one of seven recipients recognised for outstanding contributions in various agriculture-related fields.

In addition to the award, Prof. Dr. Wong was invited as a distinguished speaker at the MAEA Forum 2025, where she delivered a talk entitled “Sustainable Crop Protection,” highlighting innovative approaches towards strengthening sustainable agricultural practices.



ADVANCING SUSTAINABLE FERTILIZER SOLUTIONS



SERDANG, 19th December — In a significant boost for industrial research, Professor Dr. Wong Mui Yun, FASc, and Associate Professor Dr. Mohd. Rafein Zakaria have been awarded a substantial research grant totaling RM123,435.

The grant, provided by Wilmar Agrifet Marketing Sdn Bhd, will fund a 24-month study titled “Development of Hi Kay Gano X biofertilizer using local microbial strains and organic carriers.”

This project aims to:
Develop sustainable biofertilizer alternatives using indigenous microbial strains.

Utilize organic carriers to enhance soil health and crop productivity.

Strengthen the partnership between academia and the plantation industry to address real-world agricultural challenges.

These twin achievements underscore IKP's dual commitment to high-impact scientific research and meaningful social responsibility.

IKP SECURES INTERNATIONAL RESEARCH SERVICE PROJECT



SERDANG, 29th December — IKP continues to expand its global research footprint, with a project commissioned by Mitsui Chemicals Singapore R&D Centre Pte. Ltd., entitled “Efficacy of dsRNA molecules on the suppression of *Colletotrichum gloeosporioides* through in vitro assessment.” This collaboration is valued at RM40,000 and focuses on cutting-edge molecular solutions for crop protection.

This research service project targets *Colletotrichum gloeosporioides*, a significant fungal pathogen known to cause anthracnose in various economically important crops. By evaluating the efficacy of double-stranded RNA (dsRNA) molecules, the study aims to explore innovative, non-chemical suppression methods that could revolutionize how farmers manage plant diseases.

This initiative underscores IKP's specialized expertise in biotechnology and its ability to provide high-value technical services to leading international chemical and research firms.

INDUSTRIAL AND COMMUNITY ENGAGEMENT

DRIVING EXCELLENCE THROUGH IOI-UPM COLLABORATION



PUTRAJAYA, 21st July – IKP, UPM marked a significant milestone in academia-industry collaboration through the signing of a Memorandum of Agreement (MOA) with IOI Corporation Berhad. This strategic partnership united UPM's academic and research excellence with IOI's industry leadership to drive innovation within the plantation sector.

The collaboration opened doors for value-driven advancements in smart farming, soil health improvement, mechanization, and planting material innovation. By leveraging IKP's premier research capabilities, state-of-the-art laboratories, and facilities, the initiative addressed critical industry challenges while aligning with shared values of long-term sustainability and talent development. Together, both parties committed to optimizing productivity and advancing knowledge, paving the way for a greener, more resilient future for the plantation industry.

STRATEGIC VISIT BY IKP-UPM & LKTN: DRIVING NATIONAL KENAF INNOVATION

KOTA BHARU, 2nd September — In an effort to strengthen strategic collaboration and advance the national kenaf industry, the IKP, UPM, conducted a two-day official visit to the National Kenaf and Tobacco Board (LKTN) in Kelantan and Terengganu.

The IKP delegation was led by Prof. Ts. Dr. Siti Khairunniza Bejo (Director of IKP), accompanied by Ts. Dr. Anas Mohd Mustafah (Head, Laboratory of Plantation Systems Technology and Mechanization, PSTM), and Dr. Zailani Khuzaimah (IKP Research Officer). The visit was joined by LKTN officers, Mr. Nik Aziman Nik Husain, Director of the Engineering and Factory Division (BKK), and Mr. Mohd Zaim Mohd Nor, Director of the Research and Development Division (BRD), along with several technical officers.

The itinerary commenced in Pasir Mas, Kelantan, with technical inspections of kenaf plots, where the team observed cultivation techniques and noted the distinct harvesting cycles for animal feed (35 days) versus fiber and wood chips (120 days). Following a tour of the Kenaf Gallery in Kubang Kerian that highlighted commercial versatility, the delegation examined advanced processing machinery at the Engineering and Factory Division in Pasir Puteh and toured a processing plant in Setiu, Terengganu, before concluding with a strategic dialogue that identified several promising joint projects to modernize Malaysia's kenaf ecosystem.



INDUSTRIAL AND COMMUNITY ENGAGEMENT

COURTESY VISIT BY THE DELEGATION FROM CRI, CATAS, CHINA



SERDANG, 4th November – IKP, UPM welcomed delegates from Coconut Research Institute (CRI), Chinese Academy of Tropical Agricultural Sciences (CATAS), China. The visit aimed to foster academic exchange and strengthen research collaboration between CATAS and UPM. During the meeting, both parties shared insights on current research directions, recent findings in coconut science, and explore avenues for joint initiatives in tropical agriculture.

CATAS delegates was led by Prof. Dr. Yang Yaodong (Director/ Researcher). As part of the visit, the delegation had a chance toured in UPM's coconut cultivation area in Ladang 14 to gain firsthand knowledge of local cultivation practices and observe ongoing field research. This engagement reflects a shared commitment to advancing coconut research and promoting international cooperation in tropical agricultural sciences.

IKP WELCOMES PROF. DR. ARMANDO T. QUITAIN FROM KUMAMOTO UNIVERSITY

SERDANG, 4th November — IKP, UPM hosted Prof. Dr. Armando T. Quitain from Kumamoto University, Japan, for an academic visit at the Laboratory of Processing and Product Development. The visit marked a significant milestone in the ongoing academic collaboration between UPM and Kumamoto University, a partnership that has flourished since its inception nearly a decade ago.

The academic relationship began in 2015 when Associate Prof. Dr. Mohd Rafein Zakaria of UPM first met Prof. Dr. Quitain at the European Biomass Conference and Exhibition (EUBCE 2015) in Vienna, Austria. Their initial exchange focused on shared research interests in biomass conversion, biorefinery pathways, and sustainable processing technologies—laying the foundation for future research discussions, student mobility, and institutional engagement.

Over the years, this collaboration has expanded through several key initiatives. Among them, UPM students have pursued research opportunities at Kumamoto University under the MEXT scholarship, facilitated by the academic ties established by both researchers. Additionally, Prof. Irmawati Ramli from IKP undertook short research visits to Kumamoto University in 2016 and 2021 through the Japan-ASEAN Science, Technology and Innovation Platform (JASTIP) program, further strengthening bilateral academic exchange.



COURTESY VISIT BY DELEGATION FROM RUBBER RESEARCH CENTRE, CATAS CHINA



SERDANG, 6th November — IKP, UPM received a courtesy visit from the delegation of the Rubber Research Institute (RRI), Chinese Academy of Tropical Agricultural Sciences (CATAS), China. The visit aimed to strengthen bilateral relations in research and academic exchange between RRI-CATAS and UPM. Key topics discussed included production technologies in tropical agriculture, such as crop cultivation, disease and pest control, as well as potential collaboration in future research projects. The RRI-CATAS delegation also had the opportunity to visit IKP's Transgenic Greenhouse to observe the research and development facilities at UPM. CATAS delegation was comprised of Professor Liukui (Director of the International Cooperation Office, CATAS), Prof. Dr. Wang Lifeng (Researcher, RRI-CATAS) and Mr. Wang Jinhui (International Cooperation Office, CATAS).

EDUCATIONAL VISIT TO BOH TEA PLANTATION: EXPLORING THE SCIENCE OF PREMIUM TEA PRODUCTION

CAMERON HIGHLAND, 14th November — IKP, UPM conducted a technical visit to the BOH Tea Sungei Palas estate in Cameron Highlands to enhance industry exposure for its academic staff and researchers. During the session, participants explored the precise "two leaves and a bud" harvesting technique and learned that despite many trees being over a century old, they continue to produce high-quality yields through diligent management of pests and diseases. The visit extended into the factory, where the team observed the scientific transformation of fresh leaves through meticulous stages: withering to reduce moisture, rolling to release essential enzymes and aromas, and fermentation—a critical oxidation process that creates the dark color and strong flavor characteristic of black tea.

Beyond the factory floor, the delegation participated in an exclusive tea-tasting session, learning how brewing variables such as water temperature and steeping time drastically influence the flavor profiles of five different tea grades. A significant milestone of the visit was the high-level engagement with BOH Plantations' leadership, including General Manager Mr. Siew Chee Chiang and CEO Mr. Jason Foo. These discussions opened the door for future strategic partnerships between IKP and BOH, focusing on collaborative research, plantation technology development, and community knowledge transfer programs aimed at empowering Malaysia's broader plantation sector.



INDUSTRIAL AND COMMUNITY ENGAGEMENT

IKP RESEARCHERS PARTICIPATED IN IRRDB INTERNATIONAL RUBBER CONFERENCE 2025 IN KL

KUALA LUMPUR, 1st December – IKP participated in the IRRDB International Rubber Conference (IRC) 2025, organized by the International Rubber Research and Development Board (IRRDB) Secretariat and the Malaysian Rubber Board (MRB). The event took place at Royale Chulan, Kuala Lumpur, with the theme “Evolution of Rubber R&D.”

This year’s conference marked 100 years of rubber research in Malaysia, since its inception in 1925. The IRC gathered scientists, researchers, students, and industry stakeholders to share research, encourage collaboration, and build strategic partnerships for the future of rubber research. The program concluded with a full-day field visit to a rubber product factory in Klang Valley, offering participants practical insights into industrial applications. IKP researchers’ participation in IRC 2025 highlights UPM’s commitment to advancing sustainable rubber production and adopting innovative technologies for plantation management through the following presentations:

Prof. Ts. Dr. Siti Khairunniza Bejo, “Non-destructive Detection of Pestalotiopsis Leaf Fall Disease in Rubber Trees Using Artificial Intelligence and Hyperspectral Imaging”; Prof. Dr. Wong Mui Yun, “RNAi-mediated Spray-Induced Gene Silencing (SIGS) for the Control of Pestalotiopsis Leaf Fall Disease in Rubber (*Hevea brasiliensis*)”; Dr. Mohd Shafar Jefri, “Revisiting Fertilizer Recommendations for *Hevea brasiliensis*: Optimizing Nutrient Management for Sustainable Rubber Production”; and Pn. Siti Nooradzah Adam, “Exploring UAV-based Sensing Platforms for Rubber Tree Health Monitoring.”



PARTICIPATION AS STRATEGIC PARTNER IN THE SUSTAINABLE OIL PALM MANAGEMENT SEMINAR 2025

PUTRAJAYA, 5th December – The Sustainable Oil Palm Management Seminar 2025, themed “Shaping Tomorrow’s Plantations: From Disease Control to Yield Innovation”, was successfully held at Palm Garden Hotel, Putrajaya. The event was organized by All Cosmos Sdn Bhd, bringing together leading industry experts, researchers, and practitioners to share the latest insights, research findings, and practical strategies for strengthening sustainable oil palm management.

IKP proudly participated as a strategic partner, reinforcing its commitment to advancing sustainable plantation practices and fostering impactful collaborations between academia, industry, and policymakers. IKP remains committed to advancing its role as a catalyst for sustainable plantation development, fostering innovation and resilience to ensure the continued growth of the oil palm industry.



STRENGTHENING INDUSTRY-ACADEMIA COLLABORATION (IKP-LGM)

KUALA LUMPUR, 15th December – IKP, UPM led by Prof. Ts. Dr. Siti Khairunniza Bejo, paid a courtesy visit to the Malaysian Rubber Board (LGM) at the Natural Rubber Building (Bangunan Getah Asli), Kuala Lumpur.

The IKP management team met with the Director General of LGM, YBhg. Dato’ Dr. Zairossani Mohd Nor, along with LGM representatives, to explore potential areas of collaboration.

The discussions focused on; (a) Joint research projects regarding innovation and sustainability within the rubber industry; (b) Talent exchange programs to facilitate knowledge sharing; (c) Training and placement opportunities for students and staff.

It is hoped that this meeting will pave the way for future partnerships through the implementation of high-impact projects that will benefit the national rubber industry and the Malaysian economy.



WORKSHOP, TRAINING AND SEMINAR

CHEMICAL SPILL RESPONSE AND SPILL KIT USAGE TRAINING



SERDANG, 1st July – IKP organized a comprehensive training session focused on chemical spill response and the proper use of spill kits on Tuesday, 1 July 2025. The training was held from 10:00 AM to 12:00 PM and involved all staff and students of IKP who may be exposed to chemical spill risks in their daily tasks. The session was facilitated by Mr. Mohamad Johadi Iskandar Che Jamil, Science Officer and Head of the Occupational Safety and Health Section at Sultan Abdul Aziz Shah Hospital, Universiti Putra Malaysia.

The training served as a proactive measure against potential chemical-related occupational hazards. Unintentional spills can pose significant risks to personnel safety, environmental integrity, and operational continuity. Hence, the program was designed to reinforce participants’ knowledge and skills in handling spills effectively and safely. This initiative aligns with the Occupational Safety and Health Act 1994 (OSHA 1994) and relevant regulations that mandate employer responsibility in ensuring workplace safety and health. It is hoped that similar training sessions will be conducted periodically to ensure all staff and students of IKP remain well-prepared and competent in dealing with potential chemical spill incidents in the future.

WORKSHOP, TRAINING AND SEMINAR

ROUTE TO COMMERCIALIZATION TALK



SERDANG, 3rd July – IKP organized the "Route to Commercialization" briefing on July 3, delivered by Assoc. Prof. Dr. Wan Nurhayati Wan Abdul Rahman from Putra Science Park. The session emphasized transforming academic innovations into market-ready solutions with tangible industry impacts. Dr. Wan Nurhayati stressed that successful research extends beyond publication to solve real-world problems. Specifically for IKP, she highlighted the urgency of adopting smart farming technologies—such as IoT, AI, and drones—to address global challenges like climate change and labor shortages. She urged researchers to proactively collaborate with industry players to better understand market needs. This initiative served as a vital bridge to ensure research outcomes moved from laboratories to contributing sustainably to national development.

PARTICIPATION IN IRRDB WORKSHOP 2025 AND MEETING WITH RUBBER RESEARCH INSTITUTE, CATAS, CHINA



HAINAN, CHINA, 12th July – In a significant stride for international agricultural collaboration, Prof. Dr. Wong Mui Yun, was invited as a distinguished speaker at the International Rubber Research and Development Board (IRRDB) Workshop on Tapping Panel Dryness Rehabilitation Technology 2025. The event, held from 8th to 12th July at the scenic New Century Resort Chess Bay in Changjiang, Hainan, China, brought together leading minds in rubber science from over a dozen countries.

Prof. Dr. Wong delivered a compelling talk titled "Natural Allies: Advancing Bio-Based Strategies for Sustainable Disease Management of Rubber", where she emphasized the role of eco-friendly biological agents in combating diseases that threaten rubber productivity. Her approach aligns with global efforts to reduce chemical dependency and promote sustainable agriculture.



DJI LIDAR MAPPING & SURVEYING TRAINING COURSE TO ENHANCE DRONE TECHNOLOGY SKILLS

SERDANG, 17th July – IKP successfully organized the DJI LiDAR Mapping & Surveying Training Course from 15 to 17 July 2025. The three-day course focused on developing practical skills in drone flight operations, data processing, and analysis using LiDAR technology, which plays an increasingly vital role in mapping, plantation management, and natural resource monitoring.

Participants were introduced to key modules including the fundamentals of LiDAR and its applications, DJI drone platforms, mission planning for mapping, flight operations, field data collection, safety and data management, and data processing using DJI Terra software. A case study session was also conducted to strengthen participants' understanding of real-world applications.

The training course attracted researchers and industry practitioners, reflecting the growing importance of drone technology in supporting research and development in agriculture and geospatial sectors. This initiative not only reinforces UPM's role as a leader in agricultural technology and innovation but also fosters stronger collaboration between the university and industry through knowledge sharing and technical expertise.

Such programs align with UPM's aspiration to expand the impact of research on society and industry, while strengthening an innovative ecosystem that supports sustainable and high-tech development in agriculture and mapping.



IKP WRITING DAY 2025 INSPIRES RESEARCHERS TO ALIGN ACADEMIC GOALS WITH SOCIETAL IMPACT

SERDANG, 26th September – IKP successfully organized Hari Menulis IKP 2025 featuring a distinguished talk by Prof. Dato' Dr. Mohd Ali Hassan. Titled "The Research Journey: Aligning Publications, Graduation and Societal Impact," the session provided critical insights into bridging academic milestones with real-world contributions.

He guided researchers on harmonizing the demands of graduation and high-impact publishing with the need for societal relevance. Key takeaways from his presentation included the necessity of conducting purposeful research, cultivating a strong support ecosystem, and leveraging teamwork.

The event successfully inspired the IKP community to pursue scientific excellence that extends beyond the laboratory to benefit society at large.

SHARING SESSION BY UPMCS



SERDANG, 17th July – IKP hosted UPM Consultancy & Services Sdn. Bhd. (UPMCS) for a strategic sharing session delivered by Assistant General Manager, Ms. Norfazila binti Said. She highlighted UPMCS's diverse services, including project management, lab facilities, and professional training.

A key discussion point was the clear division of roles under Putra Consultancy, where UPMCS manages administrative and financial aspects, allowing researchers to focus solely on technical components. Ms. Norfazila also shared UPMCS's aspiration to evolve into a Contract Research Organization (CRO). The meeting successfully opened avenues for structured, high-impact collaborations, strengthening the link between academia and industry.

LI-COR TECHNOLOGY WORKSHOP



SERDANG, 27th October – IKP in collaboration with Elite Scientific Instruments Sdn. Bhd. successfully organized the "Workshop on Advanced LI-COR Instrument for Crop and Environmental Monitoring" on 27-28 October 2025 at Universiti Putra Malaysia. The workshop gathered 50 participants from various agencies and universities, aiming to strengthen skills in using LI-COR instruments for research in plantation and environmental fields. Trainers included experts from LI-COR Environmental USA (Mr. Dave Johnson), UPM (Dr. Muhammad Firdaus Sulaiman), and Elite Scientific Instruments (Amir Shahidul Nillah).



OTHER ACTIVITIES

EVACUATION DRILL AT IKP AND JINM CONDUCTED SUCCESSFULLY

SERDANG, 1st July – An evacuation drill simulating a chemical spill incident was successfully conducted at the IKP and JINM Building from 9:00 AM to 9:30 AM. The drill aimed to enhance awareness and readiness among building occupants in handling emergency situations, while also testing the competencies of the Emergency Response Team (ERT) at both facilities.



IKPPGSC ANNUAL GENERAL MEETING

SERDANG, 31st July – IKP Postgraduate Students Club (IKPPGSC) held its Annual General Meeting (AGM) attended by postgraduate students from various research fields under IKP. The meeting commenced with welcoming remarks from the IKPPGSC President, Mr. Muhammad Fitri Abu Muntalib for the 2024/2025 session, who expressed appreciation for the cooperation of all members throughout the term. Activity and financial reports for the 2024/2025 term were presented and unanimously approved.

This annual meeting aimed to strengthen the sense of community among postgraduate students and ensure the continuity of club activities that support academic and social development. The meeting has officially appointed a new leadership team for the 2025/2026 term.



IKP UNDERGOES SURVEILLANCE AUDIT REVIEW 1 FOR ISO 9001:2015 QMS

SERDANG, 26th September – IKP was selected to undergo the Surveillance Audit Review 1 for the ISO 9001:2015 Quality Management System (QMS), conducted by SIRIM auditor, Dr. Montaj Mustakim. This audit was carried out to assess the extent to which IKP's quality management system complies with ISO 9001:2015 standards, evaluate its implementation effectiveness, and identify areas for improvement to strengthen a culture of continuous excellence. The audit at IKP focused on the scope of teaching and learning, research, and operational support, particularly in evaluating the achievement of KPIs for the years 2024 and 2025.



INNOVATIONS

TrichoMax developed by Dr. Fariz Adzmi. The intellectual property has been officially licensed to Hatikal Sdn. Bhd., marking a significant milestone in translating academic research into industrial application. TrichoMax is an organic soil enhancer enriched with beneficial Trichoderma fungi. It promotes plant health by decomposing organic matter into easily absorbable nutrients and stimulating root development.



IKP POSTGRADUATE STUDENTS - SCHOLARSHIP AND POSTGRADUATE STUDENT AMBASSADOR APPOINTMENT

SERDANG, 31st October – IKP, UPM extends its heartfelt congratulations to IKP postgraduate students to received a scholarship from the Ministry of Higher Education for the year 2025, with funding commencing from 13 October 2025 to 12 April 2028. Congratulations are also extended to the following four IKP postgraduate students who have been appointed by the School of Graduate Studies (SGS), UPM as "Graduate Student Ambassadors" for the 2025/2026 session; Daarshini Ganapathy (Ph.D.), Chin Sze Jie (Ph.D.), Abdullah Zal Khan (Ph.D.) and Liew Hao Yuan (MSc.).



HOODING CEREMONY: CELEBRATING THE PHD GRADUATE DR. SITI SARIPA

SERDANG, 4th December – IKP has marked another milestone by organizing a Hooding Ceremony, a symbolic event to celebrate the success of students completing their postgraduate and doctoral studies. This meaningful occasion honored Dr. Siti Saripa Rabiah Mat Lazim, who successfully completed her PhD in Plantation Technology, as well as her supervisor, Associate Professor Dr. Nazmi Mat Nawawi, for his outstanding guidance throughout her academic journey. The event was attended by the Institute's top management, academic and non-academic staff, postgraduate students, and close family members who came to show their support.



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IKP EMPOWERMENT PROGRAM: STRENGTHENING ORGANIZATION AND REFLECTING ON ICPTech2025



PUTRAJAYA, 10th November – IKP convened at Le Méridien, Putrajaya, for the "IKP Empowerment Program" to review the recent ICPTech2025 conference and bolster organizational capacity. ICPTech2025 Chairman, Assoc. Prof. Dr. Ganesan Vadamalai, commended the staff's dedication to the successful event. Guest speaker Dr. Mohd Faiq Abdul Aziz highlighted clear communication as vital for high-performance teams, while IKP Director Prof. Ts. Dr. Siti Khairunniza emphasized that teamwork among the 26 attending staff is essential to elevating the institute's research impact.

IKP TEAMS SHINE AT UPM DIGITAL CULTURE COMPETITION 2025



SERDANG, 2nd December – IKP celebrated significant success at the Digital Culture Competition Inter PTJ 2025, organized by UPM's InfoComm Development Centre (iDEC). Two IKP teams, LabRat and BeritalKP, successfully reached the Top 5 finalists. Team LabRat introduced a smart lab equipment booking system, while Team BeritalKP showcased an integrated news management platform. Ultimately, Team BeritalKP secured third place, highlighting the institute's dedication to digital innovation. This achievement marked a milestone in strengthening IKP's digital culture and operational efficiency.