



The final scientific program

The 9th International Conference on Integration of Science and Technology for Sustainable Development 2021 (9th ICIST 2021) through Webinar-Zoom in November 19, 2021 at Faculty of Agricultural Technology, King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok, Thailand

Conference theme "Soil, water and environmental conservation, biological diversity, food safety, food security, and sustainable agriculture"

Organized by

Association of Agricultural Technology in Southeast Asia (AATSEA), Faculty of Agricultural Technology, King Mongkut's Institute of Technology Ladkrabang, KMITL (Thailand), Bengkulu University (Indonesia), General Incorporated Association for the Promotion of Self-reliance in Asia (GIAPSA, Japan), Society for Applied Biotechnology (India), Bio-Agritech Co Ltd (Vietnam), Bio Hi-tech (Cambodia), CGC organic coffee (Laos), Shwe Kant Kaw, KKS (Myanmar), Rajamangala University of Technology Tawan-ok, Chantaburi Campus (Thailand), Rambhai Barni Rajabhat University (Thailand), CAS Asian Agriculture Bio Engineering (PR China)

PROGRAM

19 November 2021

Time

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| 8:00 | Master of Ceremony (MC): Asst. Prof. Dr. Jakrapan Wongpa, Dr. Wanlada Klangnurak
Thai dance presentation |
| 8:10 | Welcome Addresses & opening remarks
Prof. Dr. Hiroyuki Konuma (Japan)
Dr. Thongchai Putthongsiri Dean
Dr. Kasem Soyong, President of AATSEA |
| 8:20 | AATSEA Awarding Announcement |

AATSEA Outstanding Leader Award 2021

Education and Research: Assist. Prof. Dr. S. Lalitha (India), Prof. Dr. Pakkamong Pongsuk (Thailand)

Community Development: Mr. Ruangsak Komkhuntod (Thailand)

Special Community Service: Prof. Dr. Thanuku Samuel Sampath Kumar Patro (India) and Prof. Dr. Younes Rezaee Danesh (Iran)

Award for emerging leader of young generation: Dr. Ramon Lorenzo Luis Guinto (Philippines)

Theme song: IMAGINE (Mr. Sarayos, P.)

Plenary and Keynote Speakers (Main conference room)

Chairs: Dr. Kasem Soyong (Thailand). 25 minute each

- 08:30-08:55 **Prof. Dr. Hiroyuki Konuma (Japan):** Sustainable Development and Covid-19 Pandemic
- 08:55-09:20 **Dr. Ramon Lorenzo Luis Guinto (Philippines):** The Planetary Health Diet: advancing human nutrition and safeguarding the environment in the anthropocene
- 09:20-9:45 **Dr. Teodoro C. Mendoza (Philippines):** True, full, and fair costs accounting of rice, the staple food of half the people of the world
- 09:45-10:10 **Prof. Dr. Kampon Sriwatanakul (Thailand):** Health benefits of organic agriculture
- 10:10-10:35 **Prof. Dr. Jin-Cheol Kim (Korea):** Can we effectively control pine wood nematode by plant resistance inducers ?
- 10:35-11:00 **Prof. T.S.S.K. Patro (India):** Investigation on the efficacy of bio-agents and chitosan against finger millet blast disease
- 11:00-11:25 **Prof. Dr. Moammar Dayoub (Finland):** Internet of thing (Iot) for smart agriculture in rural areas
- 11:25-12:50 **Prof. Ivan Tarakanov (Russia):** Agricultural Technologies of the Future: Intelligent Plant Factory
- 11:50-12:15 **Prof. Rajeev Bhat (Estonia, EU):** Circular bio-economy perspectives for sustainable management and effective valorization of food industrial wastes and by-products
- 12:15-12:40 **Kasem Soyong (Thailand):** Research investigation and application in organic agriculture for sustainable development goals (SDGs)
- 12:40-13:00 Questions and Answer

RESEARCH FORUM

ORAL PRESENTATIONS

Session 1: ORGANIC AGRICULTURE AND RELATED FIELDS

Chair persons

Chair: Prof. Nanik Setyowati (Indonesia)

**Co-chair: Dr. TSSK Patro (India), Dr. Bancha Wiangsamut (Thailand),
Dr. Lampan Khurpoon (Thailand), Dr. Teerawat Sarutayophat (Thailand)**

- 1 13:00-13:20 **IS: Nanik Setyowati:** Allelopathic effect of sorghum root extract and its potential use as a bioherbicide
- 3 13:20-13:40 **IS: Pablito Malabanan Villegas:** A paradigm shift in the promoting the adoption of organic agriculture
- 4 13:40-14:00 **IS: Somlit Vilaivong:** The organic coffee production in Lao PDR
- 5 14:00-14:20 **IS: Thet Lwin Htay:** Organic agriculture in Myanmar
- 6 14:20-14:40 **IS: Lalitha Sundaram:** Yield enhancement of *Lycopersicon esculentum* Mill. using microbial consortium
- 7 14:40-15:00 **IS: Yao Min Hong:** Circular economy of oyster shell in Taiwan
- 8 15:00-15:20 **IS: Oksana Belous:** Influence of exogenous growth-regulators on physiological and growth processes of dwarf mandarin cv. 'Miagava-Vase'
- 9 15:20-15:40 **IS: Chen Yi-sung:** Weed and pest management on paddy rice cultivation based on farmers practices
- 10 15:40-16:00 **IS: Nithya Priya:** Mass production of pseudomonas biofertilizer and its large scale application in arachis hypogaea
- 11 16:00-16:20 **IS: Md. Asaduzzaman Sarker:** The art and myth of organic agriculture for nature conservation and sustainable food production: perspective of Bangladesh
- 12 16:20-16:40 **IS: Boun Oum Douangphrachanh:** The situation of organic production in Lao PDR
- 13 16:40-17:00 **IS: Vojtech Nemeč:** Practical experience in application of bioproducts for crop production in Cambodia and ways how to make them work more effectively.
- 14 17:00-17:20 **IS: Nathala Emmanuel:** Organic beekeeping and value addition of bees wax and honey for livelihood of rural women and youth in andhra pradesh, India
- 15 17:20-17:40 **IS: Younes Rezaee Danesh:** Community structure of arbuscular mycorrhizal fungal species in saline soils of Turkey.
- 17 17:40-18:00 **IS: Gopi Krishnan:** Exploration of earthwormcast associated actinobacteria for plant growth promoting properties
- 18 18:00-18:20 **IS: Duong Minh Lam:** Biological activities of extracts and beauvericin from *Cordyceps cateniannulata* CPA14V.

Session 2: MICROBIAL TECHNOLOGY, BIODIVERSITY AND FOOD TECHNOLOGY

Chair persons

Chair: Prof. Mohamad Chozin (Indonesia),

Co-chairs: Prof. Lalitha, S. (India), Prof. Tatik Suteky (Indonesia), Dr. Suprattra Poeaim (Thailand), Dr. Nonglak Parinthawong (Thailand)

- 20 13:00-13:20 **IS: Samantha C. Karunarathna:** How to be a “fungi” not a dead guy.
- 21 13:20-13:40 **IS: Lalitha Sundaram:** Phytostabilization of glyphosate contaminated soil using Plant Growth Promoting Rhizobacteria
- 22 13:40-14:00 **Reny Herawati:** Field Evaluation of Blast Resistance on Inbred Lines Rice Derived from Crossing Bengkulu Local Varieties
- 23 14:00-14:20 **Hoàng Nguyễn:** The trial of fresh straw mushroom (*Volvariella volvacea*) preservation in 9 days
- 24 14:20-14:40 **Thitiporn Ditsawanon:** Protein hydrolysates from agricultural wastes for plant bacterial disease control
- 25 14:40-15:00 **Boda Praveen:** Evaluation of bacterial bio-agents against *Alternaria alternata* (Fr.) Keissler causing leaf blight in little millet
- 27 15:00-15:20 **IS: Raphael Okigbo:** Fungal flora of mechanic workshops and its bioremediation
- 28 15:20-15:40 **Dung T. K. Nguyen:** An Assessment of Sustainable Agro-Forestry Livelihood of K'Ho Cil Minority in Da Nhim Commune, Lac Duong District, Lam Dong Province, Vietnam.
- 29 15:40-16:00 **Minh T. Ton:** Implementing payment environmental services in Langbiang Biosphere Reserve, Vietnam.
- 30 16:00-16:20 **Naruemon Mongkontanawat:** Development and evaluation the formula of healthy mushroom beverage with high β -glucan from *Schizophyllum commune* Fr. in Thailand
- 31 16:20-16:40 **Yupa Pootaeng-On:** Antifungal activity and phytochemical analysis of *Miliusa sessilis* twig extract to control anthracnose disease in mango (*Mangifera indica*)
- 32 16:40-17:00 **Loc V. Pham:** Mycelial growth and yield of different *Pleurotus* mushroom cultivars in southern Vietnam.
- 33 17:00-17:20 **Sararat Monkhang:** Antifungal activity of *Bacillus subtilis* subsp. *spizizenii* BL-59 to control some important postharvest diseases of mango fruits (*Mangifera indica* L.)
- 34 17:20-17:40 **Nguyen V. Lam:** Identification of lovastatin analogs-producing *Pleurotus* cultivars in southern Vietnam.
- 35 17:40-18:00 **Kittichon U-Taynapunn:** Species diversity, tetracycline resistance and virulence factor gene profile of pathogenic *Aeromonas* spp. isolated from Nile tilapia seed farms in southern Thailand
- 36 18:00-18:20 **Quyên B. T. Ho:** Biological characteristics of the *Pleurotus* cultivars in southwestern Viet Nam
- 37 18:20-18:40 **Waritchon Ninlanon:** Growth and survival of lactic acid bacteria during the fermentation of durian yogurt
- 38 18:40-19:00 **Joannalyn Montemayor:** Phytochemical analysis and antifungal activities of *Passiflora edulis* var. *flavicarpa* on *Fusarium verticillioides*
- 39 19:00-19:20 **Phraeo Vjittrotai:** Proximate analysis, Mineral and germanium of *Ganoderma lucidum* (Lingzhi) powder by spray dry as affected by different species and maltodextrin

Session 3: PLANT, WATER AND SOIL SCIENCES

Chair persons:

Chair: Prof. Zainal Mukhtar (Indonesia)

**Co-chairs: Dr. Sutisa Chaikul (RBRU), Dr. Duanrung Benjamas (RBRU),
Dr. Anurug Poeaim (Thailand), Dr. Rungtawan Yomla (Thailand)**

- 40 13:00-13:20 **IS: Zainal Mukhtar:** Soil nitrate availability pattern as influenced by application of vermicompost supplemented with a liquid organic fertilizer
- 41 13:20-13:40 **Catur Herison:** Reliability of seedling stage selection for aluminium stress tolerance in hot pepper (*Capsicum annuum* L.)
- 42 13:40-14:00 **IS: Fahrurrozi Fahrurrozi:** Use of *Tithonia diversifolia* leaves for liquid organic fertilizer
- 43 14:00-14:20 **IS: Sigit Sudjatmiko:** Sweet corn root distribution under different fertilizer applications
- 44 14:20-14:40 **Sefri Oktaviani:** Coffee cherry's pulp variety and pulping delay time leading to cascara tea products
- 45 14:40-15:00 **Muhammad Farid:** Identification of soil porosity using geophysical and geotechnical observation for agricultural application
- 46 15:00-15:20 **Merakati Handajarningsih:** Enhancing soil characteristics and yield response of coffee cultivated under reduced chemical fertilizer in ultisols with application of bio-organic fertilizer containing plant growth promoting microbes
- 47 15:20-15:40 **Rathanon Lohsuwan:** Effects of draw solution concentration and operating factors on forward osmosis for lime juice concentration
- 48 15:40-16:00 **Jemaine Catherine T. Ramos:** Bacterial counts of agro-ecologically and conventionally grown salad vegetables in Laguna and Quezon provinces, Philippines, and detection of *S. aureus* and *E. coli* strains in selected vegetable samples
- 49 16:00-16:20 **IS: Bancha Wiangsamut:** Effect of ethephon on fruit ripening and fruit components of durian cv. 'Monthong' after harvest
- 50 16:20-16:40 **Varee Yoosumran:** Micropropagation of young inflorescence Curcuma hybrid In vitro
- 51 16:40-17:00 **Marwanto Marwanto:** Reducing the use of mineral fertilizer and enhancing growth performance of green onion by application of pelletized organomineral fertilizer
- 52 17:00-17:20 **Angel Deva:** Understanding the response of antioxidant mechanisms to abiotic stress in the *Arabidopsis* Negev desert relative, *Anastatica hierochuntica*
- 53 17:20-17:40 **Sandhya Rani:** Crop residue management for enhancing the soil health and productivity in red sandy loam soils
- 54 17:40-18:00 **Chamaiporn Anuwong:** Effect of timing and storage temperature on pollen viability and pollen germination in Zephyranthes Hybrid
- 55 18:00-18:20 **Colenares E. Rohilyn:** Metal accumulation of leguminous crops in mine tailings of Camarines Norte, Philippines: basis for soil remediation strategies
- 56 18:20-18:40 **Charanya Khaeksawad:** The effect of water deficit at different growth stage on yield and quality of sweet corn (*Zea mays* var *saccharata* Sturt.)
- 57 18:40-19:00 **Suwichaya Chantarasaka:** Identification of phenolic compounds and evaluation of biological activities of methanolic extracts obtained from two varieties of longan (*Dimocarpus longan*) peels

Session 4: ANIMAL, FISHERY SCIENCES AND RELATED FIELDS

Chair persons:

Chair: Prof. Fahrurrozi Fahrurrozi (Indonesia)

Co-chairs: Dr. Ronachai Sitthigripong (KMITL, Thailand), Dr. Bhutharit Vittayaphattananurak Raksasiri (SU), Dr. Yardrung Suwannarat (RBRU)

- 59 13:00-13:20 **Jinda Glinubon:** Effect of dietary supplementation with Vietnamese coriander (*Persicaria odorata*) extract on growth performance, carcass characteristics and meat quality of broilers
- 60 13:20-13:40 **Kajit Mettamehtar:** Effect of genetic groups and age on milk chemical composition from buffaloes
- 61 13:40-14:00 **Tatik Suteky:** The Preference of PE Goats on Poly-herbal Supplementation
- 62 14:00-14:20 **Ruangyote Pilajun:** Growth performance and nutrient digestibility of Thai native compared with Lowline Angus crossbred beef cattle fed with regional feedstuffs
- 63 14:20-14:40 **Kajit Mettamehtar:** Milk fatty acid profile in different genetic groups and age of buffaloes
- 64 14:40-15:00 **Lucia M. Rigos:** Determination of pregnancy associated - Glycoproteins (Pags) during and post pregnancy in riverine buffaloes (*Bubalus bubalis* Linn.)
- 65 15:00-15:20 **Panneepa Sivapirunthep:** Yield grading and prediction of combined closely trimmed and semi-boneless lean percentage using carcass traits of fattening culled dairy cattle in Thailand
- 66 15:20-15:40 **Chittraporn Yeanpet:** Effect of *Mucuna pruriens* leaves in dairy cow feed on gas production, digestibility and rumen fermentation by using in vitro gas production technique
- 67 15:40-16:00 **Manatsanun Nopparatmaitree:** Effect of feeding banana stalk on the physical quality and nutritive value of eggs, fatty acid profile, and lipid quality index in yolk of laying hens under a free-range rearing system in bamboo plantation
- 68 16:00-16:20 **Bhutharit Vittayaphattananurak Raksasiri:** Supplementation of synbiotic in diets of Thai native chicken: the effect on its production performance, intestinal histomorphology and carcass quality.
- 69 16:20-16:40 **Dwatmadji:** Short-Term Herbal Supplementation on the Physiological Condition of Bali Cattle under the Oil Palm Integration System
- 70 16:40-17:00 **Paitoon Kaewhom:** Molecular Survey of *Theileria* spp of Ruminant in Eastern border area of Thailand-Cambodia
- 71 17:00-17:20 **Panneepa Sivapirunthep:** Rib Eye Area and Sizes of Fattening Culled Dairy Cattle Determination Using Plastic Grid and Geometric Methods
- 72 17:20-17:40 **Teerajet Laohasatian:** Development of Loop-mediated Isothermal Amplification (LAMP) for rapid detection of Methicillin-resistance *Staphylococcus aureus* (MRSA) from dairy cattle
- 73 17:40-18:00 **Manatsanun Nopparatmaitree:** Dietary of probiotics and organic acids supplementation on productive performances, intestinal morphology, carcass characteristics, and meat quality of broiler chickens
- 74 18:00-18:20 **Phimook Thiwaratkoon:** The influence of fattening periods on chemical composition, fatty acid profile, cholesterol and ribonucleotide content of Charolaise crossbred steers
- 75 18:20-18:40 **Waritchon Ninlanon:** Effect of temperature storage on the quality of live mud crabs
- 76 18:40-19:00 **Sukanya Jumane:** Influence of age on the incidence of wooden breast and white striping, carcass composition, meat physicochemical property, texture profile, and chemical composition of broiler chickens
- 77 19:00-19:20 **Krittikarn Kamporn:** Effect of strain and gender on production performance, carcass characteristics and meat quality of broiler chickens
- 78 19:20-19:40 **Kataticarn Sahatsanon:** Effects of different starch sources in concentrates on meat characteristics, nutrient composition, and collagen solubility of dairy steers

Session 5: ENTOMOLOGY AND RELATED FIELDS

Chair persons:

Chair: Prof. Dwi Wahyuni Ganefianti (Indonesia)

**Co-chairs: Dr. Chongko Saetung (RMUTTO), Dr. Gopi Krishnan (India),
Dr. N. Emmanuel (India), Dr. Kamronwit Thipmanee (KMITL, Thailand)**

- 79 13:00-13:20 **Agustin Zarkani:** A First Record of Mealybug, *Planococcus bendovi* Williams (Hemiptera: Planococcus) in Southeast Asia
- 80 13:20-13:40 **Sophia Kummin:** Adulticidal toxicity of trans-anethole and geranial from natural essential oils against house fly, *Musca domestica* (L.), Muscidae; Diptera
- 81 13:40-14:00 **Nitchakan Mekha:** Larvicidal and pupicidal activities against *Musca domestica* L. of several combinations of *Cinnamomum verum*, *Cymbopogon citratus* (Stapf.), and *Illicium verum* Hook. f
- 82 14:00-14:20 **Khwunjira Chanasongram:** Larvicidal and ovicidal activities against *Aedes aegypti* (L.) of combinations between plant essential oils and their major constituent
- 83 14:20-14:40 **Navasero M.M.:** Predatory efficiency of *Euborellia* species against fall armyworm, *Spodoptera frugiperda* (J.E.Smith) (Lepidoptera:Noctuidae)
- 84 14:40-15:00 **Tanapoom Mounghthipmalai:** Adulticidal activity against housefly (*Musca domestica* L., Muscidae: Diptera) of eucalyptol, limonene, and their combined formulations
- 85 15:00-15:20 **Cheepchanok Puwanard:** Ovicidal and adulticidal activities of *Cymbopogon citratus* (DC.) Stapf and *Illicium verum* Hook. f. against *Aedes aegypti* (Linn.)
- 86 15:20-15:40 **Watcharaporn Takawirapat:** Repellency of six plant essential oils against *Periplaneta americana* L. and *Blattella germanica* L.
- 88 15:40-16:00 **Melissa Montecalvo:** Lethal Effect of Native *Metarhizium rileyi* (Farlow) Samson Isolate to Invasive Fall Armyworm, *Spodoptera frugiperda* (J.E. Smith), Infesting Corn in the Philippines
- 89 16:00-16:20 **Praiyanut Noitubtim:** Productivity of Five Entomopathogenic Nematodes in *Galleria mellonella* L. and Their Persistence in Soil under Laboratory Conditions
- 90 16:20-16:40 **Donna Ria Josue-Canacan:** Adoption of Integrated Pest Management (IPM) Technologies in Southern Philippines: Constraints and Motivations
- 92 16:40-17:00 **Siraprapa Teangpa:** Ovicidal effect against *Musca domestica* (L.) of several combinations of plant essential oils and their major constituent
- 93 17:00-17:20 **Sempurna Ginting:** Insect diversity in forest and beach ecosystems in pelabuhan ratu, sukabumi, west java
- 94 17:20-17:40 **Priyatiningsih Priyatiningsih:** Identification and Biology of Fruit Fly Attacking Some Citrus Varieties in Bengkulu
- 95 17:40-18:00 **Kancharika Pilapang:** Study on different concentrations and timing of 17 α -methyltestosterone to accumulate in water flea (*Moina* spp.) from lab-scale
- 96 18:00-18:20 **Kalayanee Theeraphapsombut:** Carcass quality traits and omega-3 content in different pork cuts from pigs fed a diet supplemented with linseed
- 97 18:20-18:40 **Pattana Somniam:** The Diversity of Terrestrial Earthworm in Agricultural Land and Adjacent areas, Uttaradit Province, Thailand

Session 6: AGRICULTURAL SCIENCES AND BIOLOGY

Chair persons:

Chair: Dr. Danilo Josue (Philippines)

Co-chairs: Dr. Teodoro C. Mendoza (Philippines), Prof. Dwatmadji (Indonesia), Dr. Kannikar Charoensuk (RMUTTO, Thailand), Dr. Komkhae Pilasombut (KMITL, Thailand)

- 98 13:00-13:20 **Kasem Soyotong:** The novel investigation of natural product nano-particles from fungi for plant immunity
- 99 13:20-13:40 **IS: Mohammad Chozin:** Progress in rice breeding for Indonesian swampland areas
- 100 13:40-14:00 **Phumipat Sangkrabun:** Effect of Drying Methods during Priming on Quality and longevity of Rice Seeds
- 101 14:00-14:20 **Ruangsak Komkhuntod:** New hybrid varieties of sugar apple and giant sour tamarind
- 102 14:20-14:40 **Jisinee Vaiyanikorn:** Larvicidal and pupicidal activities against *Aedes aegypti* L. (Diptera: Culicidae) of several combinations of plant essential oils and their major constituent
- 103 14:40-15:00 **Dwi Wahyuni Ganefianti:** Growth and yield of chili pepper stem cuttings under different compositions of inorganic fertilizer applications
- 104 15:00-15:20 **Abigail Faye V. Mancia:** Heterotrophic and Coliform Counts, and *S. aureus* and *E. coli* Detection in Soil and Fertilizer Samples Obtained
- 105 15:20-15:40 **Hesti Pujiwati:** Effects of N and P dosages on crop growth, yield, and attack of pod borer (*Etiella zinchenella*) of soybean c.v. detam-1 grown at swampy land
- 106 15:40-16:00 **Edi Susilo:** The inhibition of seed germination treated with water extract of sorghum (*Sorghum bicolor*, L.) cultivated in histosols
- 107 16:00-16:20 **Michael Jay Trapse:** Functionality of Insulin Plant (*Costus igneus* N.E. Br.) Leaf Extracts
- 108 16:20-16:40 **Wuri Prameswari:** Natural plant growth regulator effects on the vegetative growth of long pepper (*Piper retrofractum* Vahl.)
- 109 16:40-17:00 **Rustikawati Rustikawatin:** Evaluation on Salinity Tolerance of New Maize Hybrids at Early Growth and Their Performance in Coastal Field
- 110 17:00-17:20 **Prapasri Theprugsa:** Research and Development of the Restructured Shrimp Product
- 111 17:20-17:40 **Manigbas Norvie:** Enhanced partnerships with farmers' associations, the key in sustaining rice productivity and income.
- 112 17:40-18:00 **Bunny Soem:** Influence of Organic Fertilizer on the growth of Arrowroot
- 113 18:00-18:20 **Norden Lepcha:** Cost and return analysis of organic potato in Gasa District, Bhutan
- 114 18:20-18:40 **Mimi Sutrawati:** Disease Incidence and Molecular Diversity of Tungro Virus on Rice (*Oryza sativa*) in Bengkulu, Indonesia
- 115 18:40-19:00 **Muhammad Mustava:** Biological activity of rhizobacteria isolated from rhizosphere *Acacia crassicarpa* A. Cunn ex Benth. in timber plantations

Session 7: ENVIRONMENTAL SCIENCE, AGRICULTURAL EDUCATION AND DEVELOPMENT

Chair persons

Chair: Dr. Preeyanan Sittijinda (Thailand)

Co-chairs: Dr. Adisak Singseewo (Thailand), Dr. Phattraporn Soyong (Thailand), Joselito Dar (Philippines), Prof. Dr. Pakkapong Pongsuk (Thailand)

- 116 13:00-13:20 **Danilo Josue:** Learning Farm Center for Organic Agriculture Education
- 117 13:20-13:40 **IS: Pakkapong Pongsuk:** Agricultural Skills for the Promotion of Future Careers of Special Students at Phrae Panyanukul School, Phrae Province
- 118 13:40-14:00 **Jofeph Mario M. Navasero:** Effect of Black Soldier Fly, *Hermetia Illucens* (Linnaeus), Larvae on Production Performance, Egg Quality, and Nutrient Digestibility in Post-Peak Chicken Layers
- 119 14:00-14:20 **Patticha Kulsuwan:** The carbon footprint Assessment from Electricity in Amnatcharoen Province of Northeastern Thailand
- 120 14:20-14:40 **Savuth Sem:** System of Rice Intensification (SRI) vs. Chemical Intensive Rice Production: Which direction shall Cambodian rice agriculture be ?
- 121 14:40-15:00 **Bhutharit Vittayaphattananurak:** Farmers' Economic Status and Acceptability of Goat Farm Management Technology: A Case Study in the Lower Central and Upper Southern Regions of Thailand
- 122 15:00-15:20 **Garan, M.A.:** Soil erosion rate estimates using USLE of selected corn producing areas in Barangay Vitali, Zamboanga City, Philippines
- 123 15:20-15:40 **IS: Marie Fiesta:** Environmental perception of the women in Central Mindanao, Philippines
- 124 15:40-16:00 **Isaac F. Sulonteh Magr:** Improving Production Practices to Increase yield Liberian Rice
- 125 16:00-16:20 **Elderico P. Tabal:** Energy inputs and carbon emission equivalent of selected agroforestry systems in zamboanga city, Philippines
- 126 16:20-16:40 **Tawid Rasi:** Management for Promoting Agriculture Subject Learning in the Elementary School Level through KLUATOD Model, Num Nao District, Phetchabun Province
- 127 16:40-17:00 **Wattana Saduak:** Promotion of Vegetable Gardening for Household Food Storage during Covid-19 Pandemic of Farmers in Praibueng District, Srisaket Province.
- 128 17:00-17:20 **Kantika Youngmanee:** Composting of boiler-ash and biogas-sludge from the palm oil industry for use as plantlet growing media
- 129 17:20-17:40 **Nuttanan Direksri:** Important of marketing mix factors on consumer purchase decision towards organic rice of a community enterprise
- 130 17:40-18:00 **Satria Utama:** Factors Affecting Farmers' Decision in Using Subsidized and Non-Subsidized Seeds in Hybrid Corn Farming in Seluma Regency, Bengkulu Province
- 131 18:00-18:20 **Jeeranun Khermkhan:** Comparison of Cost and Return from Raw and Ripe Namdokmai Mango Planting of Large Plots in Bang Phli District, Samutprakarn Province
- 132 18:20-18:40 **Hery Suhartoyo:** Assessment of Socio-economic Aspects of Farmers under Social Forestry Program and its Environment: study case at Tanjung Alam Village, Kepahiang, Bengkulu, Indonesia
- 133 18:40-19:00 **Thammanat Posiripong:** Management of organic sweet potato from production top markets

Session 8: ADVANCED RESEARCH IN AGRICULTURAL AND BIOLOGICAL SCIENCES FOR SUSTAINABLE DEVELOPMENT GOALS (SDGs)

Chair persons:

Chair: James Kennard Jacob (Philippines)

Co-chairs: Prof. Somdej Kanokmadhakul (KKU, Thailand),

Dr. Raphael Okigbo (Nigeria), Dr. Wanlada Klangnurak (KMIL, Thailand), Rungrat Vareeket

- 134 13:00-13:20 **IS: James Kennard Jacob:** Exploring Plant Associated Endophytic Fungi as Source of Secondary Metabolites
- 135 13:20-13:40 **Suteera Vatthanakul:** Effect of Carboxymethylcellulose and Xanthan Gum on the Physicochemical and Sensory Properties of Passion Fruit Topping Sauce
- 136 13:40-14:00 **Pramote Pornsuriya:** Yield stability of new elite lines of yardlong bean (*Vigna unguiculata* (L.) Walp. ssp. *sesquipedalis* Verdc.)
- 137 14:00-14:20 **IS: Nanik Setyowati:** Allelopathy for Sustainable Weeds Management
- 138 14:20-14:40 **Rungrat Vareeket:** Nanoparticles from *Neosartorya hiratsukae* against brown leaf spot of rice caused by *Drechslera oryzae*.
- 140 14:40-15:00 **IS: Rujira Tongon:** Natural product nano-particles from *Chaetomium* for resistant of Durian Phytophthora rot
- 141 15:00-15:20 **IS: Jiaojiao Song:** Agricultural nanotechnology for plant immunity
- 142 15:20-15:40 **G. Bharathi:** Molecular Divergence Analysis for Pre-Harvest Sprouting Resistance in Rice (*Oryza Sativa* L.) genotypes
- 143 15:40-16:00 **Janejira Phakawan:** Antimicrobial Enhancement of Red Onion Crude Extract using Epsilon-polylysine
- 144 16:00-16:20 **Suriya Kosinwattana:** Effect of Different Planting Materials Ratios on the Growth of Foliage Plants
- 145 16:20-16:40 **Naruebet Meelua:** Technical Efficiency of Rice Production in Klong Suan Sub-District, Bang Bo District, Samut Prakan Province, Thailand
- 146 16:40-17:00 **Raphael Okigbo:** Underutilized plants of Africa
- 147 17:00-17:20 **Krittiya Khuenpet:** Development of Inulin Beads from Jerusalem Artichoke by spherification and reverse spherification techniques
- 148 17:20-17:40 **Suriyasit Somnuek:** In vitro effect of *Callistemon viminalis* and *Melaleuca cajuputi* ethanolic extracts as botanical fungicide and insecticide
- 149 17:40-18:00 **Narumon Tangthirasunun:** Application of organic soybean tempeh in raisin purple sweet potato cookie
- 150 18:00-18:20 **Christopher Llonas:** Influence of perceived risks in farmer's decision towards sustainable farm practices. Evidence from Northern Thailand.
- 151 18:20-18:40 **Nagia Ali:** Improvement of wool dyeing quality and antimicrobial activity using nano forms of silver

Session 9: ADVANCED RESEARCH IN BIOLOGICAL AGRICULTURE

Chair persons:

Chair: Dr. Wikanya Prathumyot (RBRU)

Prof. Sridhar Kandikere (India); Dr. Jatuporn Aroonkamonsri (RMUTTO); Dr. Somlit Vilavong (Lao PDR); Dr. Jiaojiao Song (China)

- 152 13:00-13:20 **IS: Sridhar Kandikere:** Diversity of fungal spores in barkflow, throughfall and tree holes of two mangrove tree species of southwest India
- 153 13:20-13:40 **Norden Lepcha:** Macronutrients (NPK) and other soil properties influenced by long term organic and conventional potato farming in West-Central Bhutan
- 154 13:40-14:00 **Anuwat Lakyat:** Ectoparasite species attacking chicken in eastern area of Bangkok, Thailand
- 155 14:00-14:20 **Harry Jay Cavite:** Supply chain structure and constraints of a rice production community enterprise: Evidence from rural Thailand
- 156 14:20-14:40 **Karinporn Yodsenee:** *In vitro* Study of Antioxidant and Antimicrobial Activities of Soybean Tempeh and Split Gill Mushroom (*Schizophyllum commune*) as Plant-Based Diets
- 157 14:40-15:00 **Pawat Seritrakul:** Mitochondrial DNA analysis revealed genetic diversity of captive-bred hog deer (*Axis porcinus*) population in Thailand
- 158 15:00-15:20 **Natthapon Jaisue:** Distribution and Management of Total and Available Sulfur under Durian Orchard Soils in the Eastern Thailand
- 159 15:20-15:40 **Heejung Kim:** Developing an International Cooperation Training Program and Designing Sustainable Agriculture Systems under the Climate Crisis Era.
- 160 15:40-16:00 **Napassawan Fungsoonnoen:** Survival of contaminated pathogenic bacteria in Thai fruit and Vegetable juice
- 161 16:00-16:20 **Prapasri Theprugs:** Research and Development of the healthy ready-to-eat strip Chinese sausage
- 162 16:20-16:40 **Sarocho Phopajit:** Effects of Chicken Manure and Chemical Fertilizer on Growth and Yield of Japonica Rice
- 163 16:40-17:00 **Phatthira Sakamut:** Improvement of Threadfin bream (*Nemipterus* spp.) surimi gel properties by electron beam irradiation
- 164 17:00-17:20 **Nantawan Inban:** Effects of Calcium Sources on Physiological Traits Related to Pod and Seed Yield of Peanut
- 165 17:20-17:40 **Kittiya Showpanish:** Isolation and Optimization of Enhanced Anti-*Streptococcus suis* Bacteriocin Production by *Lactobacillus plantarum* RB01-SO
- 166 17:40-18:00 **Suworanee Pancharoenn:** Effect of ingredients, storage temperature and time on texture properties and retrogradation rate of butter cake
- 167 18:00-18:20 **Jatuporn Anuchai:** Determination of biochemical activities of *Dendrobium* spp.
- 169 18:00-18:40 **Person Pesona Renta:** Growth of diatom *Amphora* sp. cultured on agar plates by streak plate technique

Session 10: ADVANCED DEVELOPMENT IN AGRICULTURAL SCIENCES

Chair persons:

Chair: Dr. Naruemon Mongkontanawat (RMUTTO)

Co-chairs: Prof. Ivan Tarakanov (Russia), Dr. Nithya Priya (India); Dr. Rujira Tongon (Thailand)

- 171 13:00-13:20 **Tanthai Waiphanta:** Control mechanism of nano-Chaetogobosin-C constructed from *Chaetomium globosum* 0805 against root rot of papaya caused by *Phytophthora palmivora*
- 172 13:20-13:40 **Racha Tepsorn:** Kinetic Reduction of *Salmonella Typhimurium* on Radish sprouts (*Raphanus sativus* L.)
- 173 13:40-14:00 **Sujitra Jorjong:** Effect of Paclobutrazol on yield and quality of Mao laung (*Antidesma thwaitesianum* Müll. Arg.) Cultivars
- 174 14:00-14:20 **Apsit Chittawanij:** Study of Biochar on Growth and Yield of Choy Sum (*Brassica chinensis* L.var *parachinensis*)
- 175 14:20-14:40 **Darinthip Thiphinkong:** Effect of Seed Coating with Fluorescent Compound on Quality and Fluorescence of Cucumber seeds
- 176 14:40-15:00 **Marlin Marlin:** Acclimatization of Micropropagated *Dendrobium* sp with The Application of Organic Fertilizer
- 177 15:00-15:20 **Kantat Thavornsawadi:** Antimicrobial Susceptibility of Chili Extract against Foodborne Pathogens and Food Related Bacteria
- 178 15:20-15:40 **Sarocho Thongmakha:** Application of nano-Chaetogobosin-c from *Chaetomium globosum* to control of tomato wilt caused by *Fusarium oxysporum* f.sp. *lycopersici*
- 179 15:40-16:00 **Nontawan Rawangpai:** Application of nano-Chaetoglobosin-C from *Chaetomium globosum* to control anthracnose of chilli caused by *Colletotrichum gloeosporioides*
- 180 16:00-16:20 **Pettida Malai:** Application of nano-Chaetogobosin-C from *Chaetomium globosum* to control brown leaf spot of rice caused by *Drechslera oryzae*
- 181 16:20-16:40 **Theeraphol Senphan:** Extraction and antioxidant activities of broken *Ganoderma lucidum* spore
- 183 16:40-17:00 **Dilek Kaya Özdoğan:** Genetic Characterization of *Rhizobium* Bacteria Isolated From Bean Nodules and Its Effect on Soil Quality
- 184 17:00-17:20 **Çağlar Sagun:** Status of Arbuscular Mycorrhizal Fungi Populations in Some Pastures of Ankara Region, Turkey
- 185 17:20-17:40 **Quang Le Dang:** Potential use of extracts and active constituent from *Desmodium sequax* to control fungal plant diseases
- 186 17:40-18:00 **Salit Supakitthanakorn:** Simultaneous and sensitive detection of CVB, CChMVd and CSVd mixed infections in chrysanthemum using multiplex nested RT-PCR
- 187 18:00-18:20 **Anandyawati Anandyawati:** Quality Comparison of Livestock Waste Through Vermicomposting with the help of *Lumbricus rubellus*
- 188 18:20-18:40 **Elviana Manalu:** Potential of PGPR isolated from the rhizosphere of pulpwood trees in stimulating the growth of *Eucalyptus pellita* (F. Muell)

Session 11: ADVANCED DEVELOPMENT OF BIOLOGICAL TECHNOLOGY

Chair persons:

Chair: Dr. Hoang ND Pham (Vietnam)

Co-chairs: Dr. Wichai Supalucksana (Thailand), Dr. Virapol Jamsawat, (Thailand), Dr. Pornpan Sukhumpinij (RBRU)

- 189 13:00-13:20 **IS: Hoang ND Pham:** Ectomycorrhizal communities of pine forest in south Vietnam and applying for reforestation
- 190 13:20-13:40 **Hoang Quoc Chinh:** Potential of *Trichoderma asperellum* as a bio-control agent against citrus diseases caused by *Penicillium digitatum* and *Colletotrichum gloeosporioides*.
- 191 13:40-14:00 **Suteera Vatthanakul:** Effects of Hydrocolloid Addition on the Quality of Cookies Substituted Wheat Flour with Sinin Rice Flour
- 193 14:00-14:20 **Jawanchanok Preesong:** Changes in soil properties affected by rice stubble burning in Bangkok soil series
- 194 14:20-14:40 **Ariefa Primair Yani:** Identification of soil insect diversity in the turtle conservation area, Bengkulu university
- 195 14:40-15:00 **Chirasak Phoemchalard:** The effects of sous-vide cooking on the physicochemical, microbiological, and carbon footprint of buffalo meat at various temperatures and times
- 197 15:00-15:20 **Bootsrapa Leelawat:** Development of Soft Cookie from Pregelatinized Banana Flour and Germinated Brown Rice
- 198 15:20-15:40 **Unnop Tassanaudom:** Combination of Humectants with Potassium Sorbate and Sodium Benzoate to Inhibit *Curvularia clavata* Contamination in Thai Fermented Fish Spicy Dip (Nam Phrik Pla Ra)
- 199 15:40-16:00 **Onanong Bunserm:** Antibacterial and anti-biofilm formation activities of high heat tolerant herbal extracts against white feces syndrome-associated *Vibrio parahaemolyticus*
- 200 16:00-16:20 **Atra Romeida:** In vitro shoot proliferation of Mangosteen's micro shoots using combination of 6-Benzylaminopurine and 1-Naphthaleneacetic concentrations.
- 201 16:20-16:40 **Thitaree Lengnuy:** Application of nano-Trichotoxin A50 from *Trichoderma harzianum* PC01 to control Anthracnose of papaya cause by *Colletotrichum gloeosporioides*
- 203 16:40-17:00 **Pheaktra Phal:** Biological control of *Colletotrichum gloeosporioides* causal agent of citrus anthracnose by using *Trichoderma hamatum* K01
- 204 17:00-17:20 **Arunrussamee Sangsila:** Isolation and characterization of actinomycetes with antibacterial and plant growth-promoting activities from maoberry cultivated soil in Northeast Thailand
- 205 17:20-17:40 **Solmaz Najafi:** Karyological Analysis on Tir Wheat Ecotypes in Van Region, Turkey
- 206 17:40-18:00 **Chaowanee Laosutthipong:** Partial Sequence Analysis of Cellulose Synthase *OsCESA4* and *OsCESA9* Genes in Native Upland Rice, Thailand

19:40

CLOSING CEREMONY

BEST PAPER AWARDS

**Closing speech for thank and welcome from Dr. Thongchai Putthongsiri
Dean**

Conclusion Remarks: Prof. Dr. Hiroyuki Konuma (Japan)

**Welcome to the 10th ICIST 2022 in India by Dr. TSSK Patro and Dr.
Lalitha Sundaram**

**Closing Address and Future Remark: Dr. Kasem Soyong,
The ICIST Theme Song “IMAGINE”**