



ICTA 2022

International Conference on Tropical Agriculture IR4.0
KUALA LUMPUR CONVENTION CENTRE, KLCC

26-28 MAY



Supported by:

**thought
for
food**



Tropical Agriculture IR4.0

DIGITALISATION OF AGRICULTURE

SPACE TECHNOLOGIES IN AGRICULTURAL MANAGEMENT

EFFECT OF CLIMATE CHANGE ON AGRICULTURE



WELCOME MESSAGE



On behalf of Academy of Tropical Agricultural Sciences Association (ATAS), I would like to welcome you to our inaugural flagship event, International Conference on Tropical Agriculture (ICTA 2022) which will cover advances in research and development on tropical agriculture. This conference will focus on digitalisation and sustainability of agriculture. Some highlights include the current interests and achievements of French Agricultural Research Centre for International Development (CIRAD), ATAS collaborating partner in France, the world largest germplasm collection on oil palms established in Malaysia etc.

It is our aim that Malaysia could be a regional hub for food and other material production for the world, being in the tropical region where natural assets abound and with the backing of science, technology, innovation and management.

Concurrent with this conference, we will showcase innovations in urban farming by the youth and an exhibition of agribusiness and services. We hope to inspire the youth and entrepreneurs to invest in tropical agriculture for mankind.

Academician Tan Sri Emeritus Prof. Datuk Dr. Augustine S.H. Ong
President, ATAS



MESSAGE BY DR TAN SWEE LIAN

Chairperson, Technical Subcommittee



The International Conference on Tropical Agriculture (ICTA) series aim to bring together leading Agri-scientists and academicians, Agri-techno-entrepreneurs, as well as, Agri-practitioners, community leaders and NGOs, to exchange and share their experiences, research findings, best practices and success stories on all aspects of Tropical Agriculture.

The conferences also provide a premier interdisciplinary platform for all agriculture stakeholders to present and discuss recent innovations, trends, and concerns as well as practical challenges encountered and possible solutions to adopt in the various fields of Tropical Agriculture. It is envisaged that an annual ICTA conference-cum-exhibition will stimulate and promote industrial development of enterprises by entrepreneurs, based on advances in tropical agricultural sciences and will encourage the youth, agriculture enthusiasts and communities to participate in and contribute actively to the development of the agriculture sector of the country.

ICTA2022 is the first of the ICTA series. For this particular conference, the theme is IR4.0, giving attention of digitalization of agriculture and innovations to counter climate change. It is timely to transform agriculture in the tropics, particularly in Malaysia, by taking it to the next level. How do we make agriculture less labour-intensive, more sustainable in the judicious use of limited resources, more resilient to climate change, and more exciting and attractive to young entrepreneurs?

Smart and precision farming through the application of AI (artificial intelligence) and ML (machine learning), IoT (the Internet of Things) – to name a few – instantly comes to mind. And this is what we, the Organising Committee of ICTA2022, is bringing to you. Whether your interest is in plantation crops (e.g. oil palm), fruits and horticultural crops (e.g. vegetables, muskmelon, figs), rice, aquaculture (e.g. fish, oysters), or even meat alternatives, you will see from our programme that we have something for everyone.

We are confident that the topics selected for presentation will attract and benefit you – either as a practising farmer, plantation owner, industry player, academic, scientist or researcher in agricultural sciences, home or community gardener, or even an entrepreneur interested in investing in future food supply systems.

A handwritten signature in black ink, appearing to read 'Tan Swee Lian'.

Tan Swee Lian, PhD, FASc, FAAET, KMN
Chairperson, Technical Subcommittee

WHO SHOULD ATTEND

- *International Organisations*
- *Countries*
- *Ministry of Agriculture*
- *State Corporations*
- *Industries*
- *Research Organisations / Universities*
- *Researchers and Academics*
- *Professional Bodies*
- *Postgraduate students*
- *Public*
- *Solution producers*
- *Entrepreneurs*

PROGRAMME



26 MAY 2022 (THURSDAY)

Master of Ceremony: Mr Henry Fu

0900 – 0940

Opening Ceremony

Welcoming remarks by Academician Tan Sri Emeritus Prof. Datuk Dr. Augustine S. H. Ong, President, Academy of Tropical Agriculture Sciences Association (ATAS)

Speech & Official Opening by YB Datuk Seri Dr Ronald Kiandee Minister of Agriculture and Food Industries Malaysia (*invited*)

Current Research Interests and Achievements of CIRAD in Tropical Agriculture Research

Dr Jean-Marc Roda, CIRAD Regional Director, representing INRAE & Agreenium for the SouthEast Asia Island Countries

0940 – 1015

TEA BREAK

Chair/Moderator: Prof Datin Paduka Setia Dato Dr Aini Ideris

1015 – 1050

Session 1A

Keynote Address 1: Digitalisation of Agriculture

Mr Chong Yong Khor, LintraMax, Malaysia

1050 – 1125

Keynote Address 2: Space Technologies in Agricultural Management

Tuan Haji Azlikamil Bin Haji Napiah, Malaysian Space Agency (MySA)

Chair/Moderator: Ar IDr Mohamed Fariz Hilmi

1125 – 1155

Session 1B

Adoption Status of Digital Agriculture in ASEAN

Prof. Dr Paul Teng, Nanyang Technological University, Singapore

1155 – 1225

Digital oil palm management

Mr. Sheldon Latra, ABS Global, Malaysia

1225 – 1255

Application of Ai and robotics in the oil palm industry

Dr Abdullah Zawawi Mohamed, Sime Darby Plantation Research Sdn Bhd

1255 – 1410

LUNCH BREAK

<i>Chair/Moderator:</i>	Mr Chong Yong Khong
1410 – 1440	Session 1C Agricultural robots and intelligent machines in rice production systems of China Prof Long Qi, South China Agricultural University, China
1440 – 1510	The use of drones in rice pest and disease surveillance and management in China Prof Dr Zhongxian Lyu, Zhejiang Academy of Agricultural Sciences, China
1510 – 1540	Sustainability authentication using a blockchain-powered connected digital supply chain platform Dr Unnikrishnan Unnithan, DIBIZ Malaysia Sdn Bhd
1540 – 1610	TEA BREAK
<i>Chair/Moderator:</i>	Dr Jean-Marc Roda
1610 – 1630	Session 1D Convergence of genomics, big data and software technology for crop improvement: Is biological data the way to move forward? Dr Lee Wei Kang, Codon Genomics, Malaysia
1630 – 1650	Horticultural crop production using IoT and precision farming technology: Success story with Japanese muskmelon Mr Seh Cheng Siang, Irritec Sdn Bhd, Malaysia
1650 – 1710	Smart farming in vanilla production in Malaysia Mr Joseph Chan Kairos Agriculture, Malaysia
1710 – 1730	Digital agriculture in France (tbc) CIRAD, France
1730	End of Day 1

27 MAY 2022 (FRIDAY)

<i>Master of Ceremony:</i>	Ms Kang Wai Chin
<i>Chair/Moderator:</i>	Prof. Dato' Dr Aileen Tan Shau Hwai
0900 – 0940	Session 2A Keynote Address: Climate change and agriculture Dr Joy J Pereira, SEADPRI, UKM, Malaysia
0940 – 1010	The Potential of Microalgae for Carbon Capture and Sustainable Biomass Production for Food and Bioactive Ingredients Dr Foo Su Chern, Monash University Malaysia
1020 – 1040	TEA BREAK

<i>Chair/Moderator:</i>	Dr Foo Su Chern
1040 – 1110	Session 2B Smart precision farming using IPM biological control technology towards IR 4.0 Mr Shawn Wong, Greenheart Farms Sdn Bhd, Malaysia
1110 – 1140	Indoor Vertical Farming and Controlled Environment Agriculture as a Viable and Sustainable Solution to Growing Food in an Urban Setting Mr Gerard Lim, Agroz Group, Malaysia
1140 – 1210	Aquaponics Digital Farming Mr Brendan Toh, Metro Farm, Singapore
1210 – 1240	Cities as circular food hubs Mr Andrew Tsui, Rooftop Republic, Hong Kong
1240 – 1400	LUNCH BREAK
<i>Chair/Moderator:</i>	Dr Rajanaidu Nookiah
1400 – 1430	Session 2C Cultured Meat in China Dr Ding Shijie, Nanjing Agricultural University, China
1430 – 1500	Countering Climate Change: Insect Protein vs Meat from Livestock Mr C.J. Sio, Life Origin, and Dr Neo Yun Ping, Taylor’s University, Malaysia
1500 – 1520	Oyster farming in Malaysia: a sustainable aquaculture system Prof. Dato Dr Aileen Tan Shau Hwai, CEMACS, USM, Malaysia
1530 – 1550	TEA BREAK
<i>Chair/Moderator:</i>	Mr Teo Leng
1550 – 1610	Session 2D World’s Largest Oil Palm Germplasm Repository: Its Application in Plant Breeding and to Mitigate Climate Change Dr Rajanaidu Nookiah, Academy of Sciences Malaysia
1610 - 1630	Everyone Can Mould! Moulding of Non-food Cassava Into Compostable Food Containers Mr K.K. Lim, NGP Technology Sdn Bhd, Malaysia
1630 - 1650	Fig production in Malaysia Ar IDr Fariz Hilmi, Mutiara Figs, Malaysia
1650 – 1710	Palm oil and its fractions: Alternatives in the cheese industry Dr Nur Haqim Ismail, Malaysian Oil Palm Board
1710 – 1730	Closing remarks Dr Tan Swee Lian, Chair of Technical Subcommittee
1730	End of Conference

REGISTRATION FORM

1. PARTICIPANT'S INFORMATION

Full Name : _____
(Please underline last name)

Title : _____ Designation : _____
(Mr/Ms/Dr/Prof/others)

Organisation : _____

Address : _____

Email : _____

Tel : _____ Fax : _____

2. REGISTRATION FEE *Please tick (✓):*

	Early Bird (Before 1 May 2022)	After Early Bird (After 1 May 2022)
<input type="checkbox"/> Online Participants	MYR 400 (USD 100)	MYR 600 (USD 150)
<input type="checkbox"/> Physical Participants	MYR 800	MYR 1,000

Registration Conditions

- Use a separate form for each participant. Photocopies of this Form can also be used. Payments can be combined for more than one participant when forms are sent in together.
- Registration is not official and complete until full payment is received by the ICTA2022 Secretariat. Confirmation of registration will be issued upon receipt of full payment.

3. MODE OF PAYMENT *Please tick (✓):*

- Cheque / Banker's Draft made payable to "Persatuan Akademi Sains Pertanian Tropika (ATAS)"
- Payment by Telegraph Transfer to 'ATAS' Account
(Please attach the advice slip of the remittance if paid by telegraphic transfer)
- Payment and Registration online
- Complimentary



Online registration
<https://forms.gle/tj3YfDwGiNNpNnHV6>

4. ICTA2022 Post-conference Cultural Tour (28 May 2022) *Please tick (✓):*

- Cultural Tour to Malacca (Local Malaysian=RM198 only)(Overseas guest=RM228 only)
- Cultural Tour to Mutiara Figs Farm (RM185 only)
- Interested

Name of Account: **Persatuan Akademi Sains Pertanian Tropika (ATAS)**

Reference: **ICTA2022**

Account Number: 564191582178

Name of Bank: Malayan Banking Berhad

Address of Bank: Maybank,
Damansara Utama

ICTA2022 Secretariat

C-3A-10, 4th Floor, Block C, Damansara Intan,
47400 Petaling Jaya, Selangor, Malaysia.

Tel: +603-7118 2064 / 2066

E-mail: atas.exco@gmail.com

(Contact Person: Mr. Azman Ismail)

For office use only:

Date : _____ / _____ / _____

Amount : _____

OR No : _____

Reg. No : _____

.....
Date

.....
Signature

ABOUT ICTA2022 EXHIBITION

The International Conference on Tropical Agriculture Exhibition is a concurrent exhibition with the 33rd International Invention, Innovation & Technology Exhibition (ITEX 2022). Over the past 32 years, ITEX has exhibited more than 1,000 inventions every year and attracted participants both local and international.

The exhibition features an enhanced programme with live and on-demand webinars, talks and forums featuring high quality speakers, exhibitors' exhibition stand and multiple matchmaking and networking offerings in an event engagement platform that will keep the invention and technology community connected and engaged.

	Local (RM)	Overseas (USD)	Discount Rate (5%)	Early Bird (15%)	
Raw Space (Per Sq M) Min 18 Sqm	950	305	902.5	807.5	Not applicable to Universities & RI
Shell Scheme (Per Booth) 3m x 3m	9160	2990	8702	7786	Not applicable to Universities & RI
Shell Scheme (Per Booth) for Startup 3m x 3m	5000	1250	n/a	n/a	
Individual Inventor (Per Booth) 2m x 2m	3380	1100	3211	2873	
IP Booth (Per Booth) 2.5m x 3m	5000	n/a	n/a	n/a	

If you would like to register for exhibition, please email your request to: shineny@cisnetwork.com

Website: <https://itex.com.my/>

INNOVATIVE URBAN FARMING COMPETITION 2022

The Innovative Urban Farming Competition is an event organised by Academy of Tropical Agricultural Sciences Association (ATAS) in collaboration with Thought for Food (TFF) Foundation. The agriculture market is facing new challenges with the price hike of imported raw materials predicted to last a while. This has affected all types of businesses in agriculture sector like food for poultry, fertilizers and many more. This will result in an adverse huge chain reaction for all food and beverage business. The competition is to create opportunity to Malaysians to help to reduce the cost of the vegetables and fruits by encouraging the public to plant their own food.

Joining this competition will bring innovations on a bigger platform to all small farming communities in Malaysia. Participants need to submit video presentation of farming and innovations. Video should be no longer than 7 minutes. Participants also need to submit write up about community farming, innovation and/or product in .pdf size 2 pieces of A3 paper and portrait format.

REGISTRATION FEES

Category 1

Public: RM350 (max 3 registered name per team) free conference attendance at ICTA worth RM2,400

Category 2

University & College (age 18-24): RM150 (max 3 registered name per team) free conference attendance at ICTA worth RM2,400

REQUIREMENTS

Farm size is between 100m² to maximum 4,000m².

Location shall be in Malaysia, preferably within a **municipal council or city council**

- The farm can either be on the ground, above the ground with or without soil.

- The farm must produce vegetables and/or fruits.

PRIZES

CATEGORY 1: Gold, Silver & Bronze, with trophy and certificates

CATEGORY 2: Gold, Silver & Bronze, with trophy and certificates

***BEST OF THE BEST:** To recommend for commercialisation through Thought For Food (TFF)

IMPORTANT DATES

REGISTRATION DATE: 1 FEBRUARY 2022

SUBMISSION DATE: 1 APRIL 2022

PRIZE GIVING DATE: 27 MAY 2022

INNOVATIVE URBAN FARMING COMPETITION 2022

REGISTRATION FORM

Full Name (team leader): _____
(Please underline last name)

Title : _____ Designation : _____
(Mr/Ms/Dr/Prof/others)

Organisation : _____

Address : _____

Email : _____

Tel : _____ Fax : _____

Please tick (✓):

	Category	Fees
<input type="checkbox"/>	Public	RM350 per team
<input type="checkbox"/>	University and College	RM150 per team

MODE OF PAYMENT *Please tick (✓):*

- Cheque / Banker's Draft made payable to "Persatuan Akademi Sains Pertanian Tropika (ATAS)"
- Payment by Telegraph Transfer to 'ATAS' Account
(Please attach the advice slip)

Name of Account: **Persatuan Akademi
Sains Pertanian Tropika (ATAS)**

Reference: **IUFC2022**

Account Number: 564191582178

Name of Bank: Malayan Banking Berhad

Address of Bank: Maybank,
Damansara Utama

IUFC Secretariat

C-3A-10, 4th Floor, Block C, Damansara Intan,
47400 Petaling Jaya, Selangor, Malaysia.

Tel: +603-71182064 / 66

E-mail: atas.exco@gmail.com

(Contact Person: Mr Azman Ismail)