

Annex A: AFTEA 2024 Exhibitors and Speakers Highlights

Novel Food, Alternative Proteins & Sustainable Food		
Exhibitor	Exhibitor Profile	Highlight(s)
Morus H19-05	<p>Morus, a university-based start-up, is leveraging silkworms' rich nutritional profile to address global protein shortages and health challenges. Silkworms offer unique nutrients, a matcha-like flavour, and functional benefits, including blood sugar regulation, as confirmed by Morus's clinical trials. Backed by Japan's leading silkworm research, Morus aims to create innovative food ingredients to combat issues like diabetes and support sustainable nutrition across ASEAN and beyond.</p> <p>https://morus.jp/</p>	<p>MorSilk®, made entirely from silkworms, is a next-gen protein rich in essential amino acids, silk protein, and 1-deoxynojirimycin (DNJ), known for its benefits in blood sugar control and gut health. KAIKO®, a consumer brand, offers products like KAIKO PROTEIN Powder MATCHA and KAIKO SilkMatcha, blending MorSilk with Japanese matcha. Since Singapore approved insect protein imports in July, these products have appealed to health-conscious, eco-aware consumers, especially those interested in diabetes prevention. Media demos are available.</p>
Nurasa D23-01	<p>Nurasa is dedicated to addressing the nutrition requirements of the everyday person, through its technology capabilities, diverse ingredient portfolio, and ecosystem insights. Their programmes, capability centre and deep networks enable their open innovation platform to be an aggregator for their channel partners to co-create, collaborate, and curate better-for-you sustainable solutions.</p> <p>The work they do help drive and accelerate the adoption of affordable and appealing better-for-you foods, nourish the communities they serve, and transform the future of food.</p> <p>www.nurasa.com</p>	<p>Nurasa will showcase its sustainable food innovations at Agri-Food Tech Expo Asia 2024, partnering with industry leaders like Fuji Oil, CREMER Sustainable Foods, Clextal, and Dassault Systèmes. Through its open innovation platform, Nurasa is building a dynamic network of collaborators and start-ups committed to advancing holistic nutrition and driving sustainable innovation in food.</p>

Novel Food Technology		
Exhibitor	Exhibitor Profile	Highlight(s)
Cell AgriTech K09-3	Cell AgriTech is revolutionising sustainable food with large-scale production of cultivated meat and seafood. Their Singapore facility, set to launch in Q3 2025, will provide affordable, eco-friendly meat alternatives while reducing production costs by over 80%. As the first facility in Singapore dedicated to cultivated meat bioprocessing, they also offer contract manufacturing services to support industry growth. Inquiries from food companies, restaurants, and hotels are encouraged. www.cell-agritech.com/	Their cultivated Japanese eel muscle cells are designed to replicate the authentic taste and texture of traditional eel while providing flexibility to meet specific product needs. They can customise the moisture content (density) and nutritional profile to align perfectly with customer requirements, ensuring that their cultivated eel delivers an ideal balance of flavour, texture, and health benefits.
Integriculture K09-02-1	Integriculture Inc. is a full-stack cellular agriculture enabler and CRDMO that equips clients to sustainably produce animal-based products, including meat. Their CulNet technology mimics living animals' biochemistry, providing low-cost serum proteins in situ for scalable cell culture. This technology is versatile, allowing for the production of various cell-cultured products, from fat cells to foie gras, using the same hardware. www.integriculture.com/en/	Their cellular agriculture starter kit, which includes the Oxy-thru Cultivator, democratises access for a broader range of entities to engage in rapid prototyping of nutritional and organoleptic profiles for cell-cultured foods. The Oxy-thru Cultivator, a line of bioreactors made from oxygen-permeable and autoclavable materials, allows for higher cell densities and easy maintenance. This product was developed by IntegriCulture Inc. in collaboration with Sumitomo Riko as part of the CulNet Consortium.

Aquaculture		
Exhibitor	Exhibitor Profile	Highlight(s)
Agriblutec M15 – 01	SimuGro and UrbanBlue are leveraging cutting-edge technology to pioneer innovative business models in global food production. With hardware from Taiwan and a smart user platform from Switzerland, they integrate AI, IoT, and big data into agriculture and aquaculture to optimise resources	The SimuGro hydroponics system is an AIoT solution that integrates lighting, gas, water, nutrients, and energy management, replacing costly traditional automation without cloud reliance. It standardises equipment integration and enables remote customisation of data collection and control. The modular system offers

	and productivity. www.simugro.com	various monitoring kits based on budget and goals, covering irrigation and cooling, while forming a resilient internal network that functions during outages. Data is visualised on the UrbanBlue platform, providing alerts and control, with AI capabilities to enhance production planning and reduce risks.
Blue Aqua D15-07	Blue Aqua International is a one-stop solution provider for the aquaculture industry worldwide. The group provides cutting-edge solutions for the management of the culture environment and the optimisation of animal nutrition. Specialised in aquaculture technology and farming the group transfers its expert solutions to over 4000 customers worldwide and operates farms in Singapore and Indonesia. www.blueaquaint.com	Under Blue Aqua's brand, Nature's Hug, the focus is on creating natural, wholesome products driven by a passion for sustainability and ethical sourcing. The brand was established in 2019 to provide fresh, clean seafood free from chemicals and antibiotics, utilising an energy-efficient farming system developed by Blue Aqua.

Food Safety & Security		
Exhibitor	Exhibitor Profile	Highlight(s)
Agency for Science, Technology and Research G09	The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector R&D agency. A*STAR nurtures scientific talent and conducts multidisciplinary research that contributes towards better economic and societal outcomes for Singapore. In partnership with key ecosystem partners, A*STAR's food & nutrition research & development (R&D) supports Singapore's goal to be a global food innovation hub. As one of the implementing agencies for the Singapore Food Story 1.0 grant initiative, A*STAR has also catalysed R&D capability building in local research	Showcase of A*STAR research and partnership with local IHLs to advance S&T in food resilience and sustainability. Highlights include Singapore Institute of Food and Biotechnology Innovation (SIFBI)'s capabilities from ingredient innovation to Asian consumer-focused food designs, and SFS1.0 projects on Future Foods, Food Safety and consumer perceptions towards alternative proteins.

	institutions in collaboration with the industry for emerging areas in the food space: Future Foods (including Alternative Proteins) and Food Safety Science and Innovation. www.a-star.edu.sg	
SCIEX K18	At SCIEX, the mission is to provide solutions for precise detection and quantification of molecules, enhancing wellness and safety. With 50 years of leadership in mass spectrometry, SCIEX has pioneered technologies since launching the first commercially successful triple quad in 1981. Now part of the Danaher family, SCIEX continues to innovate in mass spectrometry and capillary electrophoresis. www.sciex.com	Their Echo MS+ system combines high data quality with high-throughput analysis, ideal for tackling large sample quantities. With sampling rates of up to one sample per second, it generates same-day results, offering analytical flexibility and enabling informed decisions. This complete solution streamlines high-throughput workflows, eliminating bottlenecks from sample preparation to data reporting.

Smart Packaging & Processing		
Exhibitor	Exhibitor Profile	Highlight(s)
FOODPLANT D23-03	FoodPlant is Singapore's first shared facility dedicated to small-batch food production, supporting innovative companies in product development, process piloting, shelf-life extension, commercialisation, and advanced food processing technologies. Offering expertise and access to a wide range of industrial food processing equipment, FoodPlant allows companies to rent equipment on a pay-per-use basis for R&D and commercial production. The facility is SFA-licensed and ISO 22000:2018 and ISO 45001:2018 certified. www.foodplant.com.sg	Product highlights: <ul style="list-style-type: none"> • Freeze Dryer removes moisture from food through sublimation, preserving nutrients, texture, and flavour for long-term storage at ambient conditions. • Twin-Screw Extruder employs both High Moisture Extrusion (HME) and Low Moisture Extrusion (LME) technology to texturise ingredients into viable meat alternatives or snacks. • Retort Machine provides commercial sterilisation of food to extend shelf life and storage under ambient condition.
Oscillum F19-05	Oscillum is a pioneering company focused on tackling critical challenges in the agrifood system,	Stiint Pure is an ISO 22196 certified food-grade additive with antimicrobial properties that inhibits the growth of

	<p>particularly addressing food waste and foodborne illnesses caused by a lack of real-time information about food products.</p> <p>www.oscillum.com</p>	<p>key pathogens, extending the shelf life of meat, fish, and ready-to-eat meals. It enhances food safety by preventing contamination from Listeria, Salmonella, and E. coli, while its food contact-safe ingredients maintain product quality. The additive seamlessly integrates into plastic packaging, making it easy to incorporate into bags, films, and interleaving materials, ultimately reducing waste and ensuring safer food storage.</p>
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Sustainability Resource & Management		
Exhibitor	Exhibitor Profile	Highlight(s)
ENDOPHYTE H19-02	<p>Endophyte is a start-up originating from the University of Tsukuba and Ibaraki University, with a vision of 'achieving high-value greening in all environments.' The soil microorganism 'DSE,' which Endophyte researches and develops, symbiotically associates with the roots of a wide variety of plants. This enables various effects on plants, such as improving environmental stress tolerance and promoting nutrient absorption, thereby allowing the stable and high-value growth of plants in diverse environments and conditions.</p> <p>www.endo-phyte.com/en/</p>	<p>Endophyte has established the world's largest library, housing over 10,000 strains of Dark Septate Endophytes (DSE). By carefully selecting strains tailored to meet the varied requirements of businesses, Endophyte aims to deliver innovative solutions for high-value greening across diverse environments.</p>
SINGRASS D15-02	<p>Singrass is a tech company that enhances indoor environments while promoting sustainable agriculture.</p> <p>www.singrass.sg</p>	<p>Their Indoor Smart Eco System (ISES) is a compact hydroponic unit that grows fresh produce while improving air quality. It supports up to 157 plants, operates quietly, and consumes 2.7 kWh daily, making it ideal for any indoor space seeking fresh, nutritious, and pesticide-free greens.</p>

Technological Solutions		
Exhibitor	Exhibitor Profile	Highlight(s)
ITU ROBOTICS J19-3	An agro-tech start-up focusing on local food grown onsite, assisted by AI and robotics. https://iturobotics.com/	ITU combines advanced robotics with indoor farming to create optimised environments for growing organic materials. Their innovative systems are energy-efficient and designed to enhance the nutritional value of produce, resulting in what they term Hyperfood™. Each portable growth unit is equipped with intelligent monitoring and automation, allowing it to operate effectively in various conditions. With a pending patent that covers a diverse range of organic materials, including plants, fungi, and bacteria, ITU's technology represents a significant advancement in sustainable food production.
Takamiya H20	Takamiya offers comprehensive services for temporary construction equipment, including development, manufacturing, sales, rental, design, construction, management, and logistics. With 55 years of innovation in construction safety, the company has expanded into agriculture to address Japan's labour shortages. Their disaster-resistant greenhouses use scaffolding and tailored designs to ensure year-round crop growth, safeguarding livelihoods and produce. https://corp.takamiya.co/en/	The company has launched an automatic harvesting robot in Japan to combat aging and labour shortages in agriculture. This robot features AI for analysing crop growth, a specialised harvesting hand for effective picking, remote control for adjusting settings, and the ability to operate continuously for 10 hours.

Urban & Smart Farming		
Exhibitor	Exhibitor Profile	Highlight(s)
Happy Quality H19-03	Happy Quality is an ag-tech company dedicated to revitalising farming by providing market-oriented cultivation technology and purchasing all produce at a fixed price. They focus on innovative products like Hapitoma tomatoes	The Automatic Irrigation System, co-developed with Shizuoka University, uses an AI model to detect and analyse plant wilting. It adjusts water supply based on this analysis, optimising irrigation and reducing reliance on farmer intuition. The

	and DOCTOR MELON, alongside world-first AI irrigation systems and VR training tools, aiming to revolutionise agriculture globally. https://happy-quality.jp/en/	system also alerts farmers when wilting thresholds are reached, enabling early intervention.
NEXTON B-25	NEXTON is a leading agricultural venture known for operating the world's largest indoor farm, specialising in the mass production of a cold-resistant strawberry variety. Utilising proprietary LED technology and advanced cultivation systems, it achieves year-round, pesticide-free crop production. http://nexton.ag/	NEXTON operates the world's largest indoor vertical strawberry farm in South Korea and is expanding its operations to Singapore. Their technology enables year-round production of low-temperature strawberries, known for their sweetness and juiciness. This initiative supports Singapore's 30 by 30 food self-sufficiency goals and has garnered attention from the SFA.

Speaker Highlights		
Name	Designation & Company	Session
Utari Octavianty	Chief Sustainability Officer & Co-Founder, Aruna	Climate Smart Practices Forum: Panel Session: Connecting Land Agriculture with Blue Economy – A Novel Approach to Unlock Opportunities
Professor Kaiyu Guan	Founding Director of Agroecosystem Sustainability Centre, University of Illinois Urbana-Champaign	Climate Smart Practices Forum: Panel Session: Digital Transformation of the Agrifood System – for Food Security
Sheetal Sharma	Head of Innovations, RIZE	Climate Smart Practices Forum: Panel Session: Digital Transformation of the Agrifood System – for Food Security
Carrie Chan	CEO & Co-founder, Avant Proteins	Cell Cultivation Bio-Platform Novel Food Ingredients
Peter Yu	Programme Director, APAC Society for Cellular Agriculture	Cultivating the Future: Innovations and Pathways to Mainstreaming Cultivated Meat Products
Katharina Riehn	Vice President, DLG & Professor for Food Microbiology and Toxicology, University of Applied Sciences Hamburg (HAW)	In-House Farmed Fruits and Vegetables as a Contribution to Low-Microbial Nutrition for Immunocompromised Individuals
Insan Syafaat	Executive Director, Partnership for Indonesia's Sustainable Agriculture (PISAgro)	Indonesia Outlook: Bettering the Welfare of the Smallholders under

		the Inclusive Closed Loop Model (tentative)
Dr. Dares Kittiyopas	Expert Committee Member of Agricultural Research Development Agency, Ministry of Agriculture and Cooperatives, Thailand	Thailand: Lessons on Agri-Food Tech Innovations and Climate-Smart Practices
Megumi Avigail Yoshitomi	President, Japan Association for Cellular Agriculture (JACA)	Cellular Agriculture Ecosystem in Japan: How to Achieve the Market Entry
Nichol Ng	Co-founder, Food Bank Singapore	Food Bank Singapore - The Hunger Report and Ways to Address Food Insecurity
Professor Li Dan	Bezos Centre for Sustainable Proteins, Department of Food Science and Technology, National University of Singapore	Precision Fermentation's Role in Transforming the Agri-Food Tech Space
Ankur Chaudhary	Policy Specialist, Good Food Institute Asia Pacific (GFI APAC)	Novel Food Policy and Regulations in Asia

Annex B: Highlights of Shortlisted Teams and Judges Participating in Agri-Food Tech World Championship

Start-up	Company profile	Country
Brain Tree	They provide drone services and AI-powered computer vision algorithms as well as technologies in mapping, evaluation, design & planning, database development and analysis for agricultural entities, enabling the agricultural industry to process satellite remote sensing data for searching new available suitable land for plantation. https://braintreex.com/	Malaysia
Ccilu	A leading sustainable footwear brand that has dedicated a decade to innovating sustainable technology. Since its founding in 2011, they have received over 30 global design titles and social innovation awards, including notable accolades such as the Red Dot Design Award, iF Design Award, and A'Design Award. https://ccilu.com/	Taiwan
DataYoo	An AI company based in Taiwan and Singapore, focusing on precision agriculture. Their flagship SaaS platform, FarmiSpace, utilises satellite technology for efficient crop monitoring, enhancing yields and supporting food security across various regions. They provide land data analytics and predictive solutions to promote sustainability and address climate challenges. https://datayoo.com.tw/	Taiwan
Entomal	They aim to establish a circular food system through the use of Black Soldier Fly (BSF) technology. This innovative solution not only addresses biowaste treatment but also offers a sustainable source of protein, moving away from unsustainable protein sources that negatively impact the environment. https://entomal.com/	Malaysia
Forsea	A cultured fish and seafood company with proprietary, breakthrough organoid technology that can produce cultivated meat in an efficient and cost-effective manner – making price parity an achievable reality. Their first product is the freshwater eel (Unagi). https://www.forseafoods.com/	Israel
Hydroregen	They are dedicated to enhancing agricultural productivity through innovative water management solutions. Utilising cutting-edge technology, they focus on improving water properties to boost plant and aquatic growth. Their systems effectively destroy pathogens, reduce water surface tension for better	Singapore

	nutrient absorption, and increase dissolved oxygen levels, optimising conditions for crop and fish health. https://www.hydro-regen.com/	
MadeSweetly	They are revolutionising sustainable sweeteners by using synthetic biology to transform yeast into a high-efficiency producer of sweet proteins. Traditional sugar production is water-intensive and environmentally damaging, while sweet proteins face market challenges. They engineer proprietary yeast strains to produce these proteins sustainably in bioreactors, aiming for a competitive price of £1500 per kilogramme, making them attractive for food and beverage manufacturers. https://www.made-sweetly.com/	United Kingdom
MUI Robotics	They pioneered the Artificial Sense Platform, employing advanced Electronic Nose and Electronic Tongue technologies specifically designed for the food industry. Their solutions enhance quality control, flavour analysis, and food safety by offering precise aroma detection, detailed flavour profiling, and contaminant detection, ensuring product consistency and safety. https://mui-robotics.asia/en/	Thailand
Qarbotech	An agri-tech start-up empowering smallholder farmers to boost food production and combat climate change with its patented nanotechnology that enhances photosynthesis. This innovative biocompatible technology maximises light absorption in plant leaves, revolutionising traditional farming approaches focused on soil and nutrients, and accelerating crop cycles. https://qarbotech.com/	Malaysia
UniFAHs	Addresses antimicrobial resistance (AMR) with their PhagePrompt™ solutions, applying bacteriophages at various stages of food production—raw materials, processing, storage, and packaging. Their GRAS-certified products are natural, antibiotic-free, and chemical-free, promoting food safety and sustainability. https://unifahs.com/	Thailand

Judges	
Name	Designation
Prof Matthew Tan (Chief Judge)	Chair (WG1) for Sustainable Development in Agriculture & Fisheries Sectors & APEC Policy Partnership on Food Security

David Sher	Deputy Director, Tech-Biz Development (Venture Creation & Growth), Innovation & Enterprise Group, A*STAR
John Cheng	CEO & Founder, Innovate 360
Jenica Conde Cruz	Head of Corporate Innovation and Sustainability, Nestlé
Kwon Hyuk Tae	Managing Partner & CEO, Pine Venture Partners
Nitza Kardish	Chief Executive Officer, Trendlines Agrifood Singapore