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Accelerating Climate Resilience In Asia-Pacificâ??s Agri-Food System

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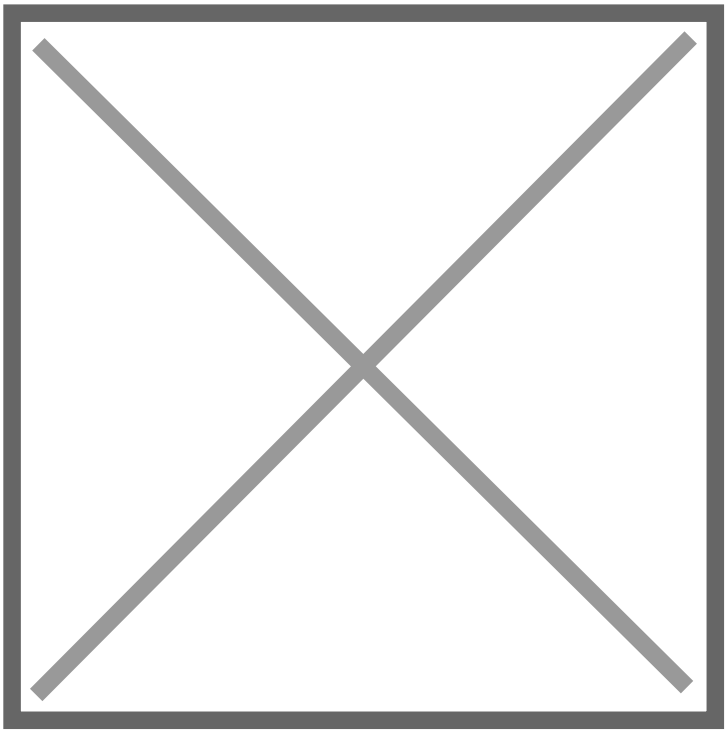
Asia-Pacific is leading the charge in the global quest for sustainable food solutions, transforming cutting-edge research into scalable innovations that are reshaping the future of food. Far from merely joining the race, the region is setting the pace, turning breakthroughs into real-world impact with remarkable speed.

Experts from Enterprise Singapore, OFI, Friesland Campina, the Gates Foundation, Nomura, Sumitomo Corporation, Main Sequence Ventures, and the Indo-Pacific Agriculture and Agri-Food Office (IPAAO) Canada shared there opinion with reference to **Asia Pacific Agri Food Innovation Summit** held in Singapore.

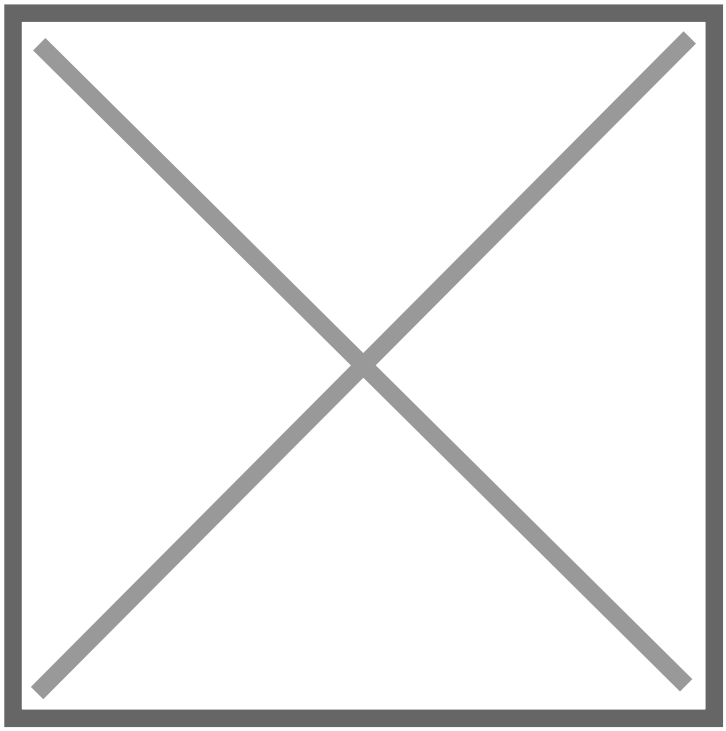


The Asia-Pacific Agri-Food Innovation Summit convenes senior leaders from across the region to advance these conversations. It provides an opportunity to engage directly with the people and partnerships driving change, including researchers, entrepreneurs, agribusinesses, corporates, policymakers, and investors.

Global leaders are driving progress by rapidly transforming research breakthroughs into tangible, real-world results. They highlighted that advancing agri-food innovation in Asia hinges on strategic partnerships that align scientific advancements with industry demands, funding approaches that mitigate risks, and technologies designed to tackle pressing issues such as protein insecurity and climate resilience.

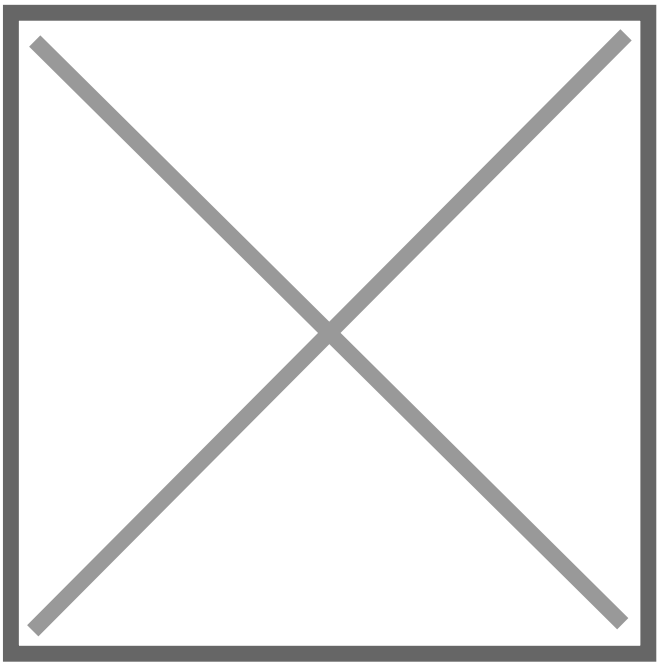
The region is transforming research into scalable solutions that are reshaping the future of food, highlighting strategies and breakthroughs that position Asia at the forefront of agri-food transformation.

Building Impact Through Collaboration



Multi-stakeholder partnerships are proving essential to scale innovation.Â **Jeannie LimÂ** ofÂ **Enterprise SingaporeÂ** highlights a landmark collaboration with the National University of Singapore, the Good Food Institute, and the Bezos Centre for Sustainable Proteins. It initiated the Sustainable Protein StartUp Competition which awards cash prizes of SGD$175,000 to accelerate early-stage sustainable protein innovation. â??This partnership reflects a shared commitment by the Singapore government, academia, and philanthropy to foster stronger private sector participation and investments in sustainable food innovation,â?• she says.Â

Main Sequence Venturesâ??Â **Phil Morle**Â echoes this sentiment, pointing to the co-founding of v2food with CSIRO and Hungry Jackâ??s as a model for â??venture scienceâ?•, a scalable approach to rapidly deploying decades of R&D into commercial supply chains. â??This kind of collaboration between research, venture capital, and corporates is what helps startups scale before the risk profile is ready,â?• he says.



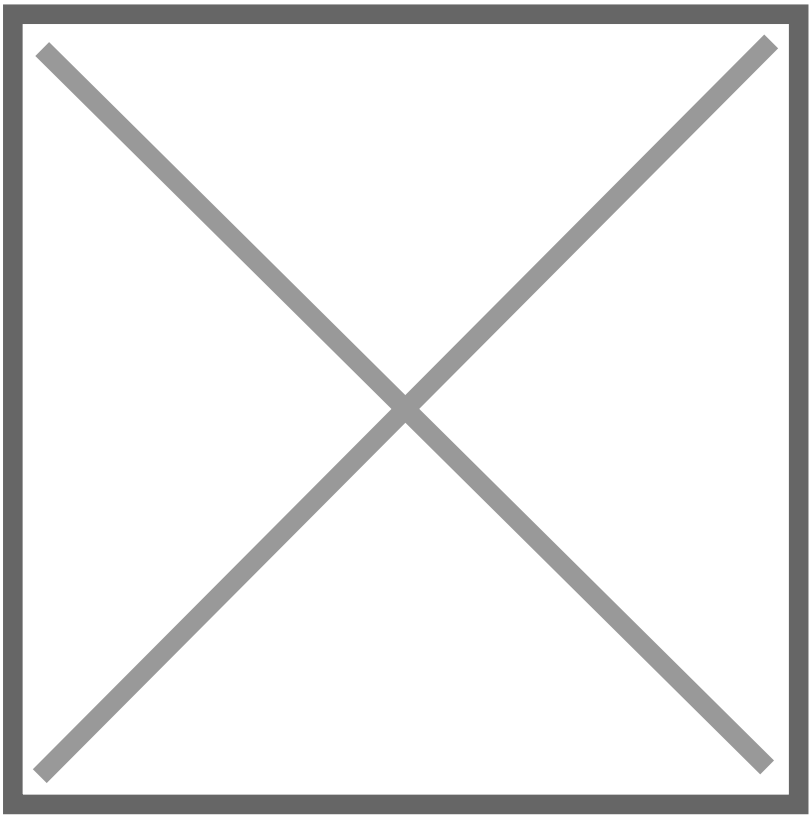
In India, theÂ **Gates Foundationâ??sÂ Srivalli Krishnan**Â shares how coordinated action in Biharâ??s aquaculture sector brought together government, private hatcheries, and entrepreneurs to sustainably scale fish farming. â??Its success lies in converging diverse efforts into one coordinated platform that empowers women, strengthens entrepreneurship, and delivers sustainable impact at scale.â?•

Sumitomo Corporationâ??sÂ **Takeo Kojima**Â adds, â??Universities provide talent, start-ups provide innovation, and corporates like us provide scaling power. Proof-of-concept projects turn ideas into tangible outcomes that attract more partners.â?• He cites Sumitomoâ??s work with Japanese genome-editing start-ups as an example of how complementary capabilities can accelerate commercialisation.Â

IPAAO Canadaâ??sÂ **Diedrah Kelly**Â brings a global perspective, highlighting Canadaâ??s role as a trusted partner in the Asia-Pacific region. â??Canada views this region not just as a market, but as a partner. Weâ??re here to build relationships rooted in shared goals: better nutrition,Â innovative agriculture, and sustainable development,â?• she says. From canola oil to pork exports, Canadaâ??s agri-food systems are deeply integrated with Asiaâ??s evolving food landscape.

Breakthroughs Across the Value Chain

Innovation is happening at every stage of the agri-food value chain.Â **OFIâ??s**Â **Kamesh Ellajosyula**Â sees promise in post-harvest value addition through AI-powered bioactive discovery. â??Weâ??re identifying novel molecules in everyday spices that transform how we view ingredient functionality,â?• he explains. OFIâ??s partnership with Brightseed and its ForagerÂ® AI platform is unlocking hidden health compounds in black pepper and garlic, creating new value from traditional crops.Â



FrieslandCampinaâ??sÂ **Pradyumna Gampala**Â points to precision fermentation as a game-changer for protein security. â??It enables local production in countries with limited agricultural land, while creating opportunities to open new export markets for high-value, sustainable food products,â?• he says. The technologyÂ offers ingredient-level solutions, such as whey analogues and functional fats, that can be integrated into existing formulations, helping companies address supply risks and nutritional gaps.

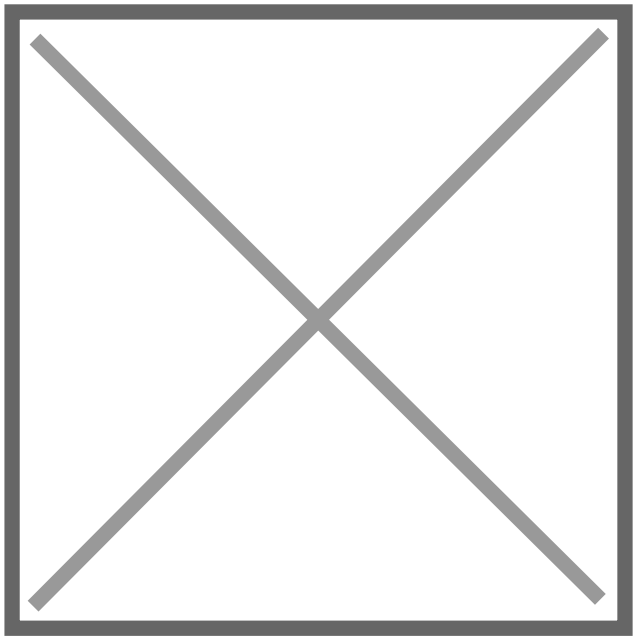
Nomuraâ??sÂ Makoto TotsukaÂ sees the next frontier in biopesticides and biofertilizers. â??As society shifts toward a circular model, these sustainable substitute inputs are poised to become a core element of the agri-tech sector,â?• he says. He envisions strategic partnerships between microbiology research institutes and companies with broad distribution networks to commercialise these alternatives at scale.Â

Meanwhile, **Sumitomo** is exploring the intersection of genetics and climate resilience. â??Carbon MRV embedded into farming could transform smallholder income and global climate action,â?• says Kojima. By linking nitrogen-fixing microbiomes with verifiable carbon credits, Sumitomo sees potential to turn agriculture into a net carbon sink.

Gates Foundation is also betting on â??genome editing and apomixisâ?? to revolutionise crop yields and resilience. â??These arenâ??t isolated innovations, they are interconnected R&D pathways with the potential to transform productivity, resilience, and livelihoods,â?• says Krishnan. She highlights the potential of Gen-2 hybrid cereals and multiplexed editing to create crops with novel architectures and enhanced immunity.

Main Sequence Ventures is focused on nutritional fortification. â??After 100 years of focusing on calories, food must now take a step closer to medicine,â?• says Morle. Heâ??s interested in research that introduces nutrition into foods people already eat, without requiring behaviour change.

Funding Models That Work



Translating research into scalable solutions requires smart funding. Ellajosyula notes that OFIâ??s success lies in â??multi-donor working groups for knowledge sharing and co-financing opportunities, plus harmonised data standards to enable transparent impact measurement.â?• OFIâ??s partnerships with Wageningen University and NestlÃ© are helping scale agroforestry and income innovations across Asia.

Gampala emphasises the importance of starting with real-world use cases and building deep industry engagement from the outset. He advocates for concessional funding paired with mandated industry partnerships. â??This model accelerates the conversion of breakthrough research into affordable, locally adapted solutions.â?•

Krishnan adds, â??Philanthropy backs early innovation, while governments integrate proven solutions into national programs, ensuring reach and sustainability.â?• She outlines three principles for scaling across Asia: patient partnerships with governments, peer learning across similar regions, and complementing public efforts with targeted philanthropic support.

Kojima describes Sumitomoâ??s blended approach: â??We do small corporate PoC investments, take strategic stakes, and leverage public R&D or development bank funding to de-risk.â?• Rather than centralising funding, Sumitomo works through its industrial partner network to tackle social issues segment by segment.

Morle calls for strategic moonshots where corporates and VCs co-invest. â??Startups often need corporates to invest before the risk profile is ready. But VCs struggle to invest because they can't see corporates coming behind an idea.

If all three collaborate around an ambitious business plan, the group can figure out together who should fund and lean into each stage,â?• he says.

The moonshot ideas shared by these leaders reflect a bold vision for the future. OFI is pursuing full supply chain transparency through its AtSource+ platform, enabling real-time monitoring and AI-powered carbon tracking.

FrieslandCampina is focused on scaling precision fermentation to address protein insecurity. Gampala believes â??coordinated progress in production, cost reduction, regulation, and sustainability will unlock mass-market impact.â?•

Main Sequence Ventures sees biomanufacturing as ready for mainstream, with biomanufacturing facilities poised to deliver commodity-priced goods. â??As large-scale biomanufacturing facilities capable of producing commodity-priced goods come online, weâ??ll see a renaissance in food production,â?• says Morle.

Gates Foundation is backing Gen-2 hybrid cereals, next-gen FMD vaccines, and low-cost AI devices for livestock genetics. Krishnan sees these innovations as part of a broader transformation across crops, soil health, and livestock.

Sumitomo envisions a protein revolution through cultured fish, algae, and insect proteins, while embedding carbon-positive practices into farming. â??To convince stakeholders, we stress three things: demand pressures are inevitable, risks can be shared, and consumer narratives matter,â?• says Kojima.

The future of agri-food innovation will be shaped not only by technological breakthroughs but by the ability to translate those breakthroughs into inclusive, scalable solutions. The perspectives shared by contributors from **Enterprise Singapore, OFI, FrieslandCampina, Gates Foundation, Nomura, Sumitomo Corporation, Main Sequence Ventures, and IPAAO Canada** reflect a growing consensus: meaningful progress depends on collaboration across sectors, sustained investment in research, and a shared commitment for regional efficiency.