MEDIA RELEASE

Republic Polytechnic's inaugural Sustainable Urban Agriculture Forum showcases innovations in agritech sector

- ***RP Agriculture Research and Innovation Centre designated as the lead centre of the newly announced Urban Agriculture Centre of Innovation, in partnership with Temasek Polytechnic***
- ***Signing of memoranda of understanding (MOU) with Priva Group, Ripe Fresh and Sembcorp Industries***

SINGAPORE, 27 October 2022 – Republic Polytechnic (RP) today organised its inaugural Sustainable Urban Agriculture Forum, in collaboration with IPI Singapore and the Trendlines Agrifood Innovation Centre.

The hybrid forum held at Sands Expo & Convention Centre is one of the highlights of the Agri-food Tech Expo Asia 2022. It brings together Asia Pacific's agriculture ecosystem through sharing different perspectives and trends on urban agriculture, food security and sustainability issues.

The event was graced by **Minister of State for Trade and Industry & Culture, Community and Youth, Mr Alvin Tan**, who launched the Urban Agriculture Centre of Innovation (UA COI), established with support from Enterprise Singapore (EnterpriseSG).

RP's Agricultural Research and Innovation Centre (AGRI Centre) is the lead for the new UA COI and is formed in collaboration with Temasek Polytechnic's (TP) Centre for Research & Opportunities in Plant Science (CROPs). The UA COI will help drive research and development (R&D) and build meaningful partnerships across the urban agriculture value-chain. It will also help develop innovation capabilities in small and medium enterprises (SMEs) in this sector. The UA COI will also contribute to the agritech startup ecosystem and value-add to the wider economy.

Mr Yeo Li Pheow, Principal/CEO, Republic Polytechnic said, "As a small city-state with limited resources, it is paramount for us to ensure that we remain innovative in spurring our capabilities in the agritech sector to ensure long-term food security. In support of Singapore's 30 by 30 food resilience goal, we are delighted to be appointed by Enterprise Singapore as a Centre of Innovation for Urban Agriculture. Together with our agritech partners, RP will continue to leverage its multi-disciplinary and agritech capabilities to develop creative solutions for the industry."

Ms Dilys Boey, Deputy Chief Executive Officer (Industry Clusters), EnterpriseSG, said, "By tapping the combined expertise of Republic Polytechnic and Temasek Polytechnic, we will be able to equip local agritech enterprises with innovative solutions in areas like plant genetics, crop health and smart farming. This will pave the way for Singapore to become a leading agri-food tech innovation hub in Asia and accelerate the development of

solutions required to address pressing food security, health and nutrition needs both regionally and globally."

The UA COI will assist local farms in their research and development (R&D) efforts, particularly in enhancing crop health, improving crop yield and enabling smart farming. It will also help these companies accelerate their business growth through internationalisation, move up the value chain and collectively tackling global resource constraints.

At the event, RP also signed three memoranda of understanding (MOUs) with Priva Group, Ripe Fresh and Sembcorp Industries. Through these MOUs, RP will explore new methods to drive sustainable farming, and utilise precision climate control technology to improve plant growth and quality. Additionally, these partnerships will present opportunities for RP to test-bed new technologies such as high pressure aeroponics that minimise water consumption when cultivating plants. The MOUs will also facilitate training and industrial attachment opportunities for RP's staff and students.

Mr Yeo added, "Today's forum is an example of our continuing efforts to engage with the industry, deepen existing partnerships whilst forging new ones across the urban agriculture and sustainability industry sector. We are pleased to partner Priva Group and Ripe Fresh while renewing our longstanding collaboration with Sembcorp Industries."

Speakers from the agriculture industry, government agencies and academia shared their insights on how to sustainably drive food supply resilience through urban agriculture. They also covered the latest trends in sustainable farming and the viability of adopting them domestically and regionally.

Delegates viewed an exhibition showcasing agritech projects completed by RP's staff and students. One of the projects on display was an artificial intelligence (AI) enabled growth light solution that reduces operating costs while increasing crop yield. Using predictive algorithms, end-users such as farmers and scientists can devise the ideal formula to optimise crop growth.

Please refer to **Appendix A** for spokespersons' quotes from Temasek Polytechnic, Priva Group, Ripe Fresh and Sembcorp Industries.

More details on the various projects showcased at the exhibition can be found in **Appendix B**.

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About Republic Polytechnic

The first educational institution in Singapore to leverage the Problem-based Learning approach for all its diploma programmes, Republic Polytechnic (RP) has seven schools and one academic centre offering 36 full-time diplomas in Applied Science, Engineering, Management and Communication, Hospitality, Infocomm, Sports, Health & Leisure, and Technology for the Arts.

RP is committed to nurturing professionals with strong problem-solving capabilities through an innovative and entrepreneurial learning environment, based on a holistic and industry-relevant curriculum. RP's Academy for Continuing Education also offers a comprehensive suite of lifelong learning programmes to provide adult learners with skills upgrading opportunities. For more information, visit http://www.rp.edu.sg.

Appendix A

SPOKESPERSONS' QUOTE SHEET

Temasek Polytechnic

"The Urban Agriculture Centre of Innovation will accelerate the development of the urban agriculture ecosystem and enable the sector to adopt a sustainable approach in addressing domestic food security issues. TP's Centre for Research & Opportunities in Plant Science (CROPS) is well-positioned to co-create innovative solutions to support local farms in their research and development efforts and add value to the wider economy. We look forward to working with our industry partners to design and cultivate sustainable technologies in plant science that will make a positive impact to businesses in this sector".

- **Mr Peter Lam, Principal & CEO, Temasek Polytechnic**

Priva Group

"Singapore is perfectly situated to discover the power of locally produced fresh and nutritious food creating new connections on a social, ecological, and economic level. With our collaboration with RP, we will share knowledge and technology to be able to educate and inspire our future agritech growers and entrepreneurs to contribute to a healthy living and working environment, developing new business models, providing more green space, saving water and balancing energy sources."

- **Ms Meiny Prins, CEO, Priva**

Ripe Fresh

"Ripe Fresh is delighted to work with Republic Polytechnic to further research on the possibilities of Agritech using Ripe technology. RP has been one of the leading polytechnic schools in Singapore and the courses that are offered relating to Agritech and urban farming will pave the way food is produced in the future."

- **Mr Paul Yung, CEO & Founder, Ripe Fresh**

Sembcorp Industries

"Following the successful launch of The Greenhouse at Republic Polytechnic (RP), we are pleased to continue partnering RP to co-develop energy solutions to drive environmental sustainability. We will leverage our renewables expertise to support our industry partners' sustainability goals, including training and development opportunities to build up the young workforce.

- **Mr Koh Chiap Khiong, CEO of Singapore and Southeast Asia, Sembcorp Industries**

Appendix B

DETAILS OF PROJECTS SHOWCASED AND MENTIONED AT THE SUSTAINABLE URBAN AGRICULTURE FORUM

Project title	Status	Description
Increased production of green leafy vegetables in indoor farms	Ongoing	I.F.F.I and RP are working together to set up the mega indoor farm factory located at JTC Space @Tuas. The collaboration has helped Precision Engineers from I.F.F.I and Plant Scientists from RP to co-work together in designing the farm and processes that will in turn produce quality vegetables under controlled conditions using vertical farming methodology. The farm will be able to achieve a harvest that yields around 300 tons of vegetables in a year. The project is supported by SFA '30 by 30 Express' grant to help local farms. The team is compiling valuable insights into deriving a handbook for setting up of industrial vertical farm(s) with context to local farming. The handbook will allow readers to comprehend the efficient use of cutting-edge technologies and designing considerations for farming processes to increase crop production in indoor farming.
Hybrid Advanced Research Vertical-Farming Environment Systems and Technology (HARVEST)	Ongoing	The project was awarded funding under the EUREKA global stars grant. A multidisciplinary and cross-country team came together to develop a hybrid system that allows control of environment to enhance the growth of plants in such a way that secondary metabolites of interest are accumulated in plants leading to production of nutrient dense crops. These metabolites produced by the plants can be managed to produce a taste, colour, texture and growth profile that is most suited for commercial production. This project is in progress and the exchange of knowledge and expertise between the parties; Republic Polytechnic, Livfresh Pte Ltd, James Hutton Institute, and Liberty Produce Pte Ltd, has been helpful in understanding the plant growth and nutrient profiles which will help researchers design the growth recipes for nutrient enhancements.